



**GREATER NEW HAVEN**  
Water Pollution Control Authority

**CONSENT ORDER WC5509**  
**Annual Progress Report**  
July 1, 2018 – June 30, 2019



# **ATTACHMENT “A”**

**GNHWPCA**

**CSO LTCP**

**ANNUAL STATUS REPORT**

**FY 2019**

2019 ANNUAL REPORT  
ATTACHMENT "A"  
  
GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY  
CSO LONG TERM CONTROL PLAN ANNUAL STATUS REPORT  
June 30, 2019

1997 EXISTING CONDITIONS MODEL							CALIBRATED 2016 CONDITIONS MODEL				2019 STATUS				LONG TERM CONTROL PLAN GOAL		
NPDES PERMIT CSO REFERENCE NO.	NO. OF CSO OUTFALLS	NO. OF CSO REGULATOR LOCATIONS	CSO REGULATOR LOCATION	CSO RECEIVING WATER	1997 CSO REGULATOR STATUS	1997 EXISTING CONDITIONS MODEL 2-YEAR DESIGN STORM CSO VOLUME (MG)	CSO LTCP CAPITAL IMPROVEMENTS 1997-2016	2016 CSO REGULATOR STATUS	CALIBRATED 2016 CONDITIONS MODEL 2-YEAR DESIGN STORM CSO VOLUME (MG)	REDUCTION 1997-2016 CSO VOLUME (MG)	NPDES PERMIT CSO REFERENCE NO.	NPDES PERMIT CSO REF. NO.	CSO LTCP AND REGULATOR IMPROVEMENTS 2013-2019	2019 CSO REGULATOR STATUS	PROPOSED CAPITAL IMPROVEMENTS	CSO LTCP FINAL CSO STATUS	CSO LTCP FUTURE CONDITIONS MODEL 2-YEAR DESIGN STORM CSO VOLUME (MG)
CSO 001	1	1	East Shore WPAF	New Haven Harbor	Active	No model data					CSO 001	CSO 001	Wet Weather Improvements	Active	Wet Weather Improvements	Active w/ Treatment	No model data
CSO 002	2	2	E.T.G. Boulevard @ Lambertson Street	West River	Active	1.5	Truman Tank	Closed	0.0	1.5	CSO 002			Closed		Closed	0.00
CSO 003	3	3	E.T.G.Boulevard @ Orange Avenue	West River	Active	0.7	Truman Tank	Active	0.9	-0.2	CSO 003	CSO 003	CSO Regulator Improvements are underway	Active	Regulator Improvements & CSO Storage Tank	Inactive	0.00
CSO 004	4	4	E.T.G. Boulevard @ Legion Avenue	West River	Active	1.0		Active	1.9	-0.9	CSO 004	CSO 004	Weir raised 8 inches in 2014, CSO Regulator Improvements are underway	Active	Regulator Improvements & CSO Storage Tank	Inactive	0.00
CSO 005	5	5	E.T.G. Boulevard @ Derby Avenue	West River	Active	2.4		Active	1.2	1.2	CSO 005	CSO 005	Weir raised 1.45 feet in 2014	Active	CSO Storage Tank	Inactive	0.00
CSO 005 (A)		6	University Place		Active	Discharges to CSO 005 outfall		Closed			CSO 007			Closed		Closed	0.00
CSO 005 (B)		7	Elm / University Place		Active	Discharges to CSO 005 outfall		Closed			CSO 005 (B)			Closed		Closed	0.00
CSO 006	6	8	Whalley Avenue @ Fitch Street	West River	Active	2.3		Active	2.3	0.0	CSO 006	CSO 006	CSO Regulator Improvements are underway	Active	Regulator Improvements & CSO Storage Tank	Inactive	0.00
CSO 007	7	9	Munson Street @ Canal Street	Mill River	Closed	0.0		Closed	0.0	0.0	CSO 007			Closed		Closed	0.00
CSO 008	8	10	Munson Street @ Orchard Street	Beaver Ponds	Active	0.0		Closed	0.0	0.0	CSO 008			Closed		Closed	0.00
CSO 009	9	11	Grand Avenue @ James Street	Mill River	Active	0.5		Active	0.4	0.1	CSO 009	CSO 009	Weir raised 8 inches in 2015, I&I Project complete	Active	Sewer Separation	Inactive	0.00
CSO 010	10	12	East Street @ I-91	Mill River	Active	0.3	Sewer Separation	Closed	0.0	0.3	CSO 010			Closed		Closed	0.00
CSO 010 (A)		13	East Street @ I-91	Mill River	Active	Discharges to CSO 011 outfall		Active	Discharges to CSO 011 outfall	Discharges to CSO 011 outfall	CSO 010 (A)	R 010 (A)	Sewer Separation Design Complete, Discharges to CSO 011	Active		Inactive	0.00
CSO 011	11	14	Humphrey Street @ I-91	Mill River	Active	6.2	Sewer Separation	Active	2.6	3.6	CSO 011	CSO 011	Sewer Separation Design Complete	Active	CSO Storage Tank	Inactive	0.00
CSO 012	12	15	Mitchell Drive east of Nicoll Street	Mill River	Active	1.0	Sewer Separation	Active	0.2	0.8	CSO 012	CSO 012	Closed in 2018	Closed	Capacity improvement project / Close CSO	Closed	0.00
CSO 013	13	16	Everitt Street @ East Rock Road	Mill River	Active	0.1	Sewer Separation	Closed	0.0	0.1	CSO 013			Closed		Closed	0.00
CSO 013 (A)		17	East Rock Road @ Everitt Street		Active	Discharges to CSO 013 outfall		Closed			CSO 013 (A)			Closed		Closed	0.00
CSO 014	14	18	Trumbull Street @ Orange Street	Mill River	Active	Discharges to CSO 011 outfall		Closed			CSO 014			Closed		Closed	0.00
CSO 015	15	19	James Street Siphon	Quinnipiac River	Active	1.5		Active	0.7	0.8	CSO 015	CSO 015	I&I Project complete	Active	Sewer Separation & CSO Storage Tank	Inactive	0.00
CSO 016	16	20	Poplar Street @ River Street	Quinnipiac River	Active	1.4		Active	1.5	-0.1	CSO 016	CSO 016	Replaced duckbill in 2018	Active	Sewer Separation & CSO Storage Tank	Inactive	0.00
CSO 017	17	21	Grand Avenue @ Front Street	Quinnipiac River	Closed	0.0		Closed	0.0	0.0	CSO 017			Closed		Closed	0.00
CSO 018	18	22	Lombard Street @ North Front Street	Quinnipiac River	Active	0.0	Sewer Separation	Closed	0.0	0.0	CSO 018			Closed		Closed	0.00
CSO 019	19	23	Pine Street @ North Front Street	Quinnipiac River	Active	0.4	Sewer Separation	Closed	0.0	0.4	CSO 019	CSO 019	Closed in 2015	Closed		Closed	0.00
CSO 020	20	24	Quinnipiac Avenue @ Clifton Street	Quinnipiac River	Active	0.1		Active	0.1	0.0	CSO 020	CSO 020	Capacity improvement project is underway	Active	Capacity improvement project / Close CSO	Closed	0.00
CSO 021	21	25	East Street Pump Station	New Haven Harbor	Active	1.4	Sewer Separation	Active	1.5	-0.1	CSO 021	CSO 021	Sewer Separation Design Complete; Duckbill 2013	Active	Major Pump Station Upgrade	Inactive	0.00
CSO 021 (A)	22	26	Chapel / Hamilton	New Haven Harbor	Active	Discharges to CSO 021 outfall	Sewer Separation	Closed	0.0	0.0	CSO 021 (A)			Closed		Closed	0.00
CSO 022	23	27	Allen Place	New Haven Harbor	Active	No model data	Sewer Separation	Closed	0.0	0.0	CSO 022			Closed		Closed	0.00
CSO 023	24	28	Chestnut Street @ Water Street	New Haven Harbor	Closed	0.0		Closed	0.0	0.0	CSO 023			Closed		Closed	0.00
CSO 024	25	29	Boulevard Pump Station	New Haven Harbor	Active	3.2	Truman Tank	Active	0.0	3.2	CSO 024	CSO 024	Weir raised 1.5 feet in 2017	Active	Major Pump Station Upgrade & CSO Storage Tank	Inactive	0.00
CSO 025	26	30	Union Pump Station	New Haven Harbor	Active	1.4	Sewer Separation	Active	1.0	0.4	CSO 025	CSO 025	Weir raised 9.15 feet in 2019	Active	Regulator Improvements & Major Pump Station Upgrade	Inactive	0.00
CSO 025 (A)	27	31	Elm / University Place	New Haven Harbor	Active	Discharges to CSO 025 outfall	Sewer Separation	Closed			CSO 025 (A)			Closed		Closed	0.00
CSO 025 (B)	28	32	Grove / Whitney	New Haven Harbor	Active	Discharges to CSO 025 outfall	Sewer Separation	Closed			CSO 025 (B)			Closed		Closed	0.00
CSO 026	29	33	Humphrey Pump Station	Mill River	Active	Discharges to CSO 011 outfall	Sewer Separation	Active	Discharges to CSO 011 outfall	Discharges to CSO 011 outfall	CSO 026	R 026	Discharges to CSO 011, Pump station upgrade is underway	Active	Pump Station Upgrade / Close CSO	Closed	0.00
CSO 027	30	34	East / Ives	Mill River	Active	0.4		Closed	0.0	0.4	CSO 027			Closed		Closed	0.00
CSO 028	31	35	Mitchell Pump Station	Mill River	Active	Discharges to CSO 012 outfall		Active	Discharges to CSO 012 outfall	Discharges to CSO 012 outfall	CSO 028	R 028	Closed in 2018	Closed	Pump Station Upgrade / Close CSO	Closed	0.00
CSO 029	32	36	Barnes Pump Station	Quinnipiac River	Active	No model data	Pump Station Upgrade	Closed			CSO 029			Closed		Closed	0.00
CSO 030	33	37	Quinnipiac Pump Station	Quinnipiac River	Active	No model data	Pump Station Upgrade	Closed			CSO 030			Closed		Closed	0.00
CSO 031	34	38	South Frontage / Davenport	New Haven Harbor	Active	Discharges to CSO 025 outfall	Sewer Separation	Closed			CSO 031			Closed		Closed	0.00
CSO 032	35	39	Port Sea / Liberty	New Haven Harbor	Active	Discharges to CSO 025 outfall	Sewer Separation	Closed			CSO 032			Closed		Closed	0.00
CSO 033	36	40	Carlisle / Liberty	New Haven Harbor	Active	Discharges to CSO 025 outfall	Sewer Separation	Closed			CSO 033			Closed		Closed	0.00
CSO 034	37	41	George / Temple	New Haven Harbor	Active	Discharges to CSO 025 outfall	Sewer Separation	Active	Discharges to CSO 025 outfall	Discharges to CSO 025 outfall	CSO 034	R 034	Closed in 2019	Closed	Close Regulator	Closed	0.00
CSO 035	38	42	Woodward Pump Station	New Haven Harbor	Active	No model data		Closed			CSO 035			Closed		Closed	0.00
(not assigned)	39	43	Greene Street	New Haven Harbor	Active	0.3		Closed	0.0	0.3	(not assigned)			Closed		Closed	0.00
N/A	40	44	Middletown / Front	Quinnipiac River	Closed	0.0		Closed	0.0	0.0	N/A			Closed		Closed	0.00
N/A	41	45	State / James	Mill River	Closed	0.0		Closed	0.0	0.0	N/A			Closed		Closed	0.00
CSO VOLUME (MG)						26.0			14.3	11.7							0.00
CSO VOLUME REDUCTION (%)						0.0			45%								100%
NUMBER OF ACTIVE CSO REGULATORS						40		18					15		0		
NUMBER OF INACTIVE / CLOSED CSO REGULATORS						5		27					30		45		
NUMBER OF ACTIVE CSO OUTFALLS						26		14					13		0		
NUMBER OF INACTIVE / CLOSED CSO OUTFALLS						5		17					18		31		

LEGEND/NOTES	
■	DENOTES CSO OUTFALL CURRENTLY INACTIVE/CLOSED
	CSO VOLUME ESTIMATES WERE OBTAINED FROM THE 2016 CSO LTCP UPDATE REPORT

DEFINITIONS	
ACTIVE	ACTIVE CSO DURING A 2-YEAR STORM FREQUENCY
INACTIVE	INACTIVE CSO DURING STORM FREQUENCIES BELOW 2-YEARS
CLOSED	CLOSED - BULKHEADED CSO - CLOSED FOR ALL STORMS

**ATTACHMENT “B”**

**DEEP LETTER  
CORRESPONDENCE**

**FY 2019**



FY 2019 DEEP LETTER CORRESPONDENCE						
APPROVAL DATE	LETTER TYPE	CWF #	PROJECT	Amount	TO	FROM
07/06/18	Draft Engineering Agreement Approval	711-DC	2016-03 West River CSO Improvement Project	\$353,178	Sid Holbrook	Denise Ruzicka, PE
07/06/18	Executed Engineering Agreement Approval	711-DC	2016-07 CSO Reduction Utilizing Green Infrastructure	\$276,640	Sid Holbrook	Denise Ruzicka, PE
07/11/18	Construction Contract Award	711-DC	2016-07 CSO Reduction Utilizing Green Infrastructure	\$0	Sid Holbrook	Denise Ruzicka, PE
07/16/18	Executed Engineering Agreement Approval	711-DC	2016-03 West River CSO Improvement Project	\$353,178	Sid Holbrook	Denise Ruzicka, PE
07/19/18	Approval of Addenda	711-DC	2016-03 West River CSO Improvement Project - Approval for Addenda #s 1 thru 7	\$0	Sid Holbrook	Denise Ruzicka, PE
01/09/19	Draft Engineering Agreement Approval	718-PG	SSES Mill River Trunk Sewer Metering Areas 7,11,15 & 22 in Hamden, CT	\$575,000	Sid Holbrook	Denise Ruzicka, PE
01/24/19	Executed Engineering Agreement Approval	718-PG	SSES Mill River Trunk Sewer Metering Areas 7,11,15 & 22 in Hamden, CT	\$575,000	Sid Holbrook	Denise Ruzicka, PE
05/07/19	Change Order Approval	711-DC	2016-07 CSO Reduction Utilizing Green Infrastructure Change Order #1	\$992	Sid Holbrook	Denise Ruzicka, PE
'07/19	Proposed Change Order #1	711-DC	2016-05 Improvements to Regulators 034 and 025	-\$218,690.82	Sid Holbrook	Denise Ruzicka, PE
06/18/19	Change Order #1 FINAL	711-DC	2016-05 Improvements to Regulators 034 and 025	-\$218,690.82	Sid Holbrook	Denise Ruzicka, PE

**ATTACHMENT "C"**

**DEEP / GNHWPCA**

**LETTER & EMAIL**

**CORRESPONDENCE**

**FY 2019**



**FY 2019 GNHWPCA LETTER & E-MAIL CORRESPONDENCE/TRANSMITTALS**

DATE	DOCUMENT TYPE	Ref/CWF #	PROJECT	TO	FROM
06/27/18	email & ltr	Annual Report	GNHWPCA 2017/18 Annual Progress Report per Consent Order WC5509	G.Hicks/D.Ruzicka	T.Sgroi
07/10/18	email	Consent Order	Modified Consent Order Draft (uncompiled and compiled)	G.Hicks/D.Ruzicka	T.Sgroi
09/13/18	ltr	Reg. Closure	CSO Regulator 012 Closure Report	G.Hicks	T.Sgroi
10/10/18	ltr	CSO Closure	CSO Regulator 028 and CSO Outfall 012 Closure Report	G.Hicks	T.Sgroi
02/13/19	email	EIE	EIE Staus - Post Scoping Notice	T.Sgroi	G.Hicks
03/14/19	email	CWF 2019-04	Process Air Compressor System Evaluation for Low Level Nitrogen Removal	G.Hicks	T.Sgroi
06/06/19	email	CWF 2017-01	CWF Application Grant Elligibility - LL Nitrogen and East St PS WW	G.Hicks	T.Sgroi
06/11/19	email	CWF 2017-02	CWF Application Grant Elligibility - LL Nitrogen and East St PS WW	T.Sgroi	G.Hicks
06/13/19	email	CWF 2017-03	CWF App. Grant Elligibility - LL Nitrogen and East St PS WW - General Agreement	G.Hicks	T.Sgroi

**ATTACHMENT “D”**

**ANNUAL CSO FLOW  
MONITORING DATA**

**JUNE 2019**



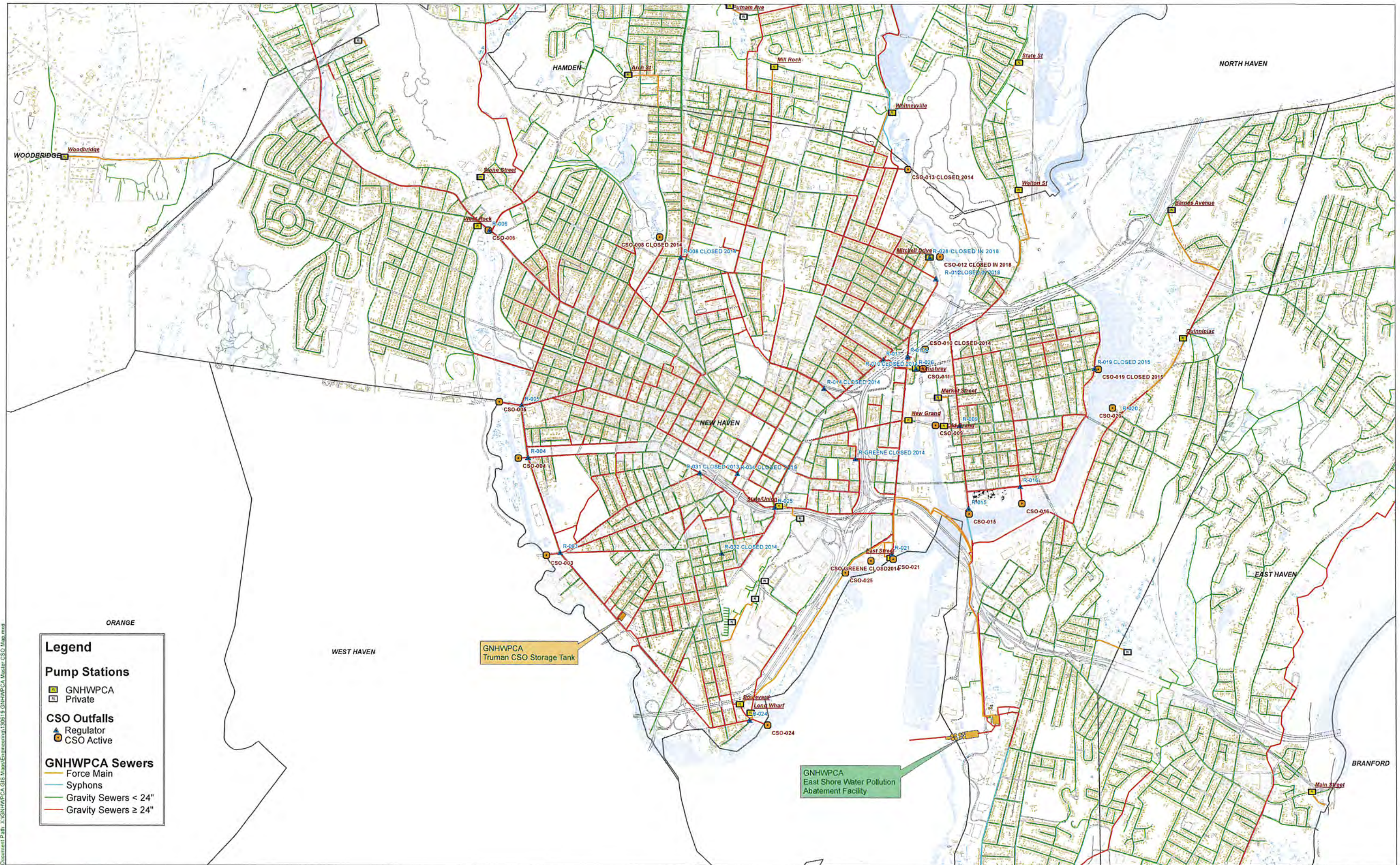
**ATTACHMENT "D"**

**JUNE 2019  
ANNUAL CSO FLOW MONITORING PROGRAM DATA**

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# **UPDATED SEWER MAP**



Document Path: X:\GNHWPCA GIS Maps\Engineering\130619 GNHWPCA Master CSO Map.mxd

**Legend**

**Pump Stations**

- GNHWPCA
- Private

**CSO Outfalls**

- Regulator
- CSO Active

**GNHWPCA Sewers**

- Force Main
- Syphons
- Gravity Sewers < 24"
- Gravity Sewers ≥ 24"

## GNHWPCA COMBINED SEWER OVERFLOW (CSO) AND REGULATOR (R) LOCATIONS AND STATUS



Document Path: X:\GNHWPCA GIS Maps\Engineering\130619 GNHWPCA Master CSO Map.mxd

# **REGULATOR & CSO DESIGNATIONS & STATUS**

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY  
REGULATOR AND CSO DESIGNATIONS AND STATUS**

30-Jun-19

<u>(1) NPDES CSO #</u>	<u>(1) NPDES REGULATOR LOCATION</u>	<u>(1) NPDES CSO RECEIVING WATER</u>	<u>(1) NPDES CSO STATUS</u>	<u>(2) CSO #</u>	<u>(2) CSO STATUS</u>	<u>(2) REG #</u>	<u>(2) REG STATUS</u>
#003	E.T. Grasso Boulevard @ Orange Av	West River	Active	#003	Active	#003	Weir replaced in 2012
#004	E.T. Grasso Boulevard @ Legion Av	West River	Active	#004	Active	#004	Weir raised 8 inches in 2014
#005	E.T. Grasso Boulevard @ Derby Av	West River	Active	#005	Active	#005	Weir raised 1.45 feet in 2014
#005 (A)	University Place	West River	Active	None	Closed prior to 2008	None	Closed prior to 2008
#005 (B)	Elm/University Place	West River	Active	None	Closed prior to 2008	None	Closed prior to 2008
#006	Whalley Av @ Fitch Street	West River	Active	#006	Active	#006	Active
#008	Munson St @ Orchard St	Mill River	Active	#008	Closed in 2014	#008	Closed in 2014
#009	Grande Av @ James St	Mill River	Active	#009	Active	#009	Weir raised 8 inches in 2015
#010	East St @ I-91 (2 Weirs/2 Regulators)	Mill River	Active	#010	Closed in 2014	#010	Closed in 2014
#010 (A)	East St @ I-91 (2 Weirs/2 Regulators)	Mill River	Active	#011	Active	#010 (A)	Active
#011	Humphrey St @ I-91	Mill River	Active	#011	Active	#011	Active
#012	Mitchell Dr east of Nicoll St	Mill River	Active	#012	Closed in 2018	#012	Closed in 2018
#013	Everitt St @ East Rock Rd	Mill River	Active	#013	Closed in 2014	#013	Closed in 2014
#013 (A)	East Rock Rd @ Everitt St	Mill River	Active	None	Closed prior to 2008	None	Closed prior to 2008
#014	Trumbull St @ Orange St	Mill River	Active	#011	Active	#014	Closed in 2014
#015	James St Siphon	Quinnipiac River	Active	#015	Active	#015	Active
#016	Poplar St @ River St	Quinnipiac River	Active	#016	Active	#016	Weir repaired in 2014
#019	Pine St @ North Front St	Quinnipiac River	Active	#019	Closed in 2015	#019	Closed in 2015
#020	Quinnipiac Av @ Clifton St	Quinnipiac River	Active	#020	Active	#020	Active
#021	East St Pump Station	New Haven Harbor	Active	#021	Active	#021	Active
#021 (A)	Chapel/Hamilton	New Haven Harbor	Active	None	Closed prior to 2008	None	Closed prior to 2008
#024	Boulevard Pump Station (Sea St)	New Haven Harbor	Active	#024	Active	#024	Weir raised 1.5 feet in 2017
#025	Union Pump Station (Union & State St)	New Haven Harbor	Active	#025	Active	#025	Weir raised 9.15 feet in 2019
#025 (A)	Elm/University Place	New Haven Harbor	Active	None	Closed prior to 2008	None	Closed prior to 2008
#025 (B)	Grove/Whitney	New Haven Harbor	Active	None	Closed prior to 2008	None	Closed prior to 2008
#026	Humphrey Pump Station	Mill River	Active	#011	Active	#026	Active
#027	East/Jves	Mill River	Active	None	Closed prior to 2008	None	Closed prior to 2008
#028	Mitchell Pump Station	Mill River	Active	#012	Active	#028	Closed in 2018
#031	S. Frontage/Davenport	New Haven Harbor	Active	None	Closed in 2013	None	Closed in 2013
#032	Port Sea/Liberty	New Haven Harbor	Active	#025	Active	#032	Closed in 2014
#033	Carlisle/Liberty	New Haven Harbor	Active	None	Closed prior to 2008	None	Closed prior to 2008
#034	George/Temple	New Haven Harbor	Active	#025	Active	#034	Closed in 2019
	Greene St	New Haven Harbor	Active	Greene	Closed in 2014	Greene	Closed in 2014
	Middletown/Front	Quinnipiac River	Active	None	Closed prior to 2008	None	Closed prior to 2008
				12	ACTIVE CSOs	14	ACTIVE REGULATORS

(1) NPDES Permit # CT 0100366 dated February 9, 2016  
(2) Ongoing CSO Flow Monitoring Program initiated in June 2012

# **METER LOCATION SUMMARY**

**GREATER NEW HAVEN WPCA  
CSO FLOW MONITORING PROGRAM  
METER LOCATION SUMMARY  
APRIL 2, 2019**

**UPDATED TO NAVD88 DATUM**

**OF-003 SEWER AND OVERFLOW**

- Meter OF-003 Sewer was installed in the 72 inch wide by 67 inch high sewer downstream of REG 003 on 6/5/12 at an invert elevation of 1.34 (overflow depth is 46 inches)
- Meter OF-003 Overflow was installed in the 54 inch overflow pipe on 6/5/12 at an invert elevation of 1.70
- The regulator consists of an 5 foot long transverse weir at elevation 5.15
- CSO start and stop times are based on a depth greater than 46 inches at Meter OF-003 Sewer and positive velocities at Meter OF-003 Overflow
- CSO volumes are calculated based on depths and velocities at Meter OF-003 Overflow, the hydraulic elements chart and the Continuity Equation
- There is significant tidal influence at Meter OF-003 Overflow
- Check the SCADA data to confirm that the Boulevard Pump Station is pumping at maximum flow of 27 MGD during any CSO events.

**OF-004 SEWER AND OVERFLOW**

- Meter OF-004 Sewer was installed in the 72 inch wide by 64 inch high sewer downstream of REG 004 on 6/6/12 at an invert elevation of 3.00 (overflow depth is 43 inches)
- Meters OF-004 Overflow was installed in the 5 foot wide by 3 foot high box culvert overflow on 6/6/12 at an invert elevation of 3.01
- The regulator consists of three weirs, each two feet wide. The weirs were raised 8 inches on 7/25/14 to elevation 6.59
- CSO start and stop times are based on a depth greater than 43 inches at Meter OF-004 Sewer and positive velocities at Meter OF-004 Overflow
- CSO volumes are calculated based on depths and velocities at Meter OF-004 Overflow, the hydraulic elements chart and the Continuity Equation
- Check the SCADA data to confirm that the Boulevard Pump Station is pumping at maximum flow of 27 MGD during any CSO events.

**OF-005 SEWER AND OVERFLOW**

- Meter OF-005 Sewer was installed in the 60 inch wide by 57 inch high sewer at REG 005 on 6/7/12 at an elevation of 4.27 (5 inches above the invert due to sediment) (overflow depth is 72 inches)
- Meter OF-005 Overflow was installed in the 48 inch overflow pipe on 6/7/12 at an invert elevation of 7.35 downstream of the 36 inch drain connection

- Meter OF-005 Overflow was reinstalled in the 48 inch overflow pipe on 11/17/13 at an invert elevation of 7.35 upstream of the 36 inch drain connection
- A new overflow weir was constructed on 7/25/14 at an elevation of 10.25
- CSO start and stop times are based on a depth greater than 72 inches at Meter OF-005 Sewer and positive velocities at Meter OF-005 Overflow
- CSO volumes are calculated based on depths and velocities at Meter OF-005 Overflow, the hydraulic elements chart and the Continuity Equation
- Check the SCADA data to confirm that the Boulevard Pump Station is pumping at maximum flow of 27 MGD during any CSO events.

#### **OF-006 SEWER, OVERFLOW AA AND OVERFLOW BB**

- Meter OF-006 Sewer was installed in the 36 inch sewer upstream of the two overflow pipes on 6/4/12 at an invert elevation of 7.20 (overflow depth is 27 inches)
- Meters OF-006 Overflows AA and BB were installed in the twin 24 inch overflow pipes on 7/30/12 at an invert elevation of 9.49 which is equal to the overflow elevation
- CSO start and stop times are based on a depth greater than 27 inches at Meter OF-006 Sewer and positive velocities at Meters OF-006 Overflows AA and BB
- CSO volumes are calculated based on depths and velocities at Meters OF-006 Overflows AA and BB, the hydraulic elements chart and the Continuity Equation
- Check the SCADA data to confirm that the Boulevard Pump Station is pumping at maximum flow of 27 MGD during any CSO events.

#### **OF-009 SEWER AND OVERFLOW**

- Meter OF-009 Overflow was installed in the 30 inch wide by 45 inch high overflow pipe on 10/3/12 at an invert elevation of 2.65
- The regulator consists of a 5.5 foot long weir at an elevation of 4.65. The weir was rebuilt on January 27, 2013. The overflow was raised 8 inches to elevation 5.32 on 6/23/15.
- Meter OF-009 Sewer (FM-19) was installed in the 35 inch wide by 52 inch high sewer one manhole upstream of REG-009 on 7/21/15 at an invert elevation of 2.81 (overflow depth is 30 inches)
- CSO start and stop times are based on a depths greater than 30 inches at Meter OF-009 Sewer (FM-19) and positive velocities at Meter OF-009 Overflow
- CSO volumes are calculated based on depths and velocities at Meter OF-009 Overflow, the hydraulic elements chart and the Continuity Equation
- There is significant tidal influence at Meter OF-009 Overflow
- Check the meter data at Meter OF-015 DS Sewer to confirm that the James Street siphon is operating at maximum flow of 24 MGD during any CSO events.

#### **REG 010A (CSO 011)**

- Meter REG 010A was installed in the 54 inch sewer at REG 010A on 12/20/12 at an invert elevation of 7.42 (overflow depth is 62 inches)



- The regulator is a 114 inch wide weir at elevation 12.62
- CSO start and stop times at REG 010A are based on a depth greater than 62 inches at Meter REG 010A
- CSO volumes at REG 010A are calculated based on depth over the 114 inch weir at REG 010A using the weir formula

#### **REG 011 (METERS OF-011-997, 609, 631 AND 819) (CSO 011)**

- Four meters were installed in December 2012 to estimate CSOs at REG 011
- Meter OF-011-997 was installed in the 30 inch sewer on State Street upstream of the 42 inch discharge pipe– **(THIS METER WAS REMOVED IN SEPTEMBER 2013)** Metered flows were very consistent and relatively small
- Meter OF-011-609 was installed in the 37 inch wide by 25 inch high sewer on Humphrey Street upstream of REG 011– **(THIS METER WAS REMOVED IN SEPTEMBER 2013)** Metered flows were very consistent and relatively small
- Meter OF-011-631 was installed in the 66 inch sewer on State Street upstream of REG 011
- Meter OF-011-819 was installed in the 42 inch discharge pipe downstream of REG 011 and Meter OF-011-631
- CSO start and stop times at REG 011 are estimated by subtracting the flows from the downstream meter (Meter OF-011-819) from the one upstream meter (Meter OF-011-631) (anytime the resultant flow is greater than zero a CSO is occurring)
- CSO volumes from REG 011 are estimated using the resultant flows as calculated above
- Total CSO volumes from CSO 011 are estimated by summing the CSO volumes from REG 010A, REG 011 and REG 026

#### **REG 026 AT HUMPHREY STREET PUMP STATION**

- Regulator 026 is a 10 inch overflow pipe from the Humphrey Street PS wetwell to CSO 011
- The SCADA system monitors the depth in the wetwell
- When depths in the wetwell exceed 74 inches an overflow is occurring

#### **OF-012 SEWER**

- Meters OF-012 Overflows A and B were installed in the twin 18 inch overflow pipes on 10/15/12 at an invert elevation of 13.05 **(THESE METERS WERE RELOCATED IN SEPTEMBER 2014)**
- New 6 inch high weirs were installed in each 18 inch overflow pipes on 5/3/13 at an elevation of 13.65 (raising the overflow depth to 36 inches)
- The new Meter OF-012 Sewer was installed in the 36 inch wide by 55 inch high sewer, three manholes downstream of REG 012, at an invert elevation of 9.89 (overflow depth is 36 inches)
- **CSO REGULATOR 012 AND CSO OUTFALL 012 WERE CLOSED IN OCTOBER 2018**

#### **REG 028 AT MITCHELL DRIVE PUMP STATION**

- Regulator 028 is a 15 inch overflow pipe from the Mitchell Drive PS wetwell to CSO 012
- **CSO REGULATOR 028 WAS CLOSED IN OCTOBER 2018**

**OF-015 US and DS SEWERS**

- Meter OF-015 US Sewer was installed in the 45 inch sewer upstream of REG 015 on 10/3/12 at an invert elevation of -1.21
- Meter OF-015 DS Sewer was installed in the 48 inch sewer to the James Street siphon inlet downstream of REG 015 on 10/3/12 at an invert elevation of -2.15 (overflow depth is 40.5 inches)
- The James Street siphon was designed with a capacity of 24 MGD
- The regulator consists of a 7 foot long concrete weir at elevation 1.22
- CSO start and stop times are based on depths greater than 40.5 inches at Meter OF-015 DS Sewer
- CSO volumes are calculated by subtracting the Meter 015 DS Sewer flows from the Meter 015 US Sewer flows
- Check the meter data at Meter OF-015 DS Sewer to confirm that the James Street siphon is operating at maximum flow of 24 MGD during any CSO events.

**OF-016 SEWER AND OVERFLOW**

- Meter OF-016 Overflow was installed in the 48 inch wide by 60 inch high overflow pipe on 8/30/12 at an invert elevation of -0.43
- Meter OF-016 Sewer was installed in the 54 inch sewer two manholes downstream of Regulator 016 on 7/11/17 at an invert elevation of -0.03
- The regulator consists of an 3.8 foot long weir at an elevation of 2.35
- CSO start and stop times are based on depths greater than 42 inches at Meter OF-016 Sewer and positive velocities at Meter OF-016 Overflow
- CSO volumes are calculated based on depths and velocities at Meter OF-016 Overflow, the hydraulic elements chart and the Continuity Equation
- Check the meter data at Meter OF-015 DS Sewer to confirm that the James Street siphon is operating at maximum flow of 24 MGD during any CSO events.

**OF-020 SEWER AND OVERFLOW**

- Meter OF-020 Overflow (depth sensor) was installed in the 15 inch overflow pipe at REG 020 on 3/25/13 at an invert elevation of 12.90
- Meter OF-020 Sewer was installed in the 24 inch sewer at REG 020 on 3/25/13 at an invert elevation of 10.45 (overflow depth is 30 inches)
- The regulator is a 15 inch pipe
- CSO start and stop times are based on a depth greater than 30 inches at REG-020
- CSO volumes are calculated based on depth over the 30 inches at REG-020 using the hydraulic elements chart and the Continuity Equation

**REG 021-OF AND OF-021 US SEWER (E ST PS SEWER)**

- Meter OF-021 US Sewer (E St PS) was installed in the 62 inch wide by 67 inch high sewer upstream of REG 021 on 9/13/12 at an invert elevation of -0.95
- Meter OF-021 was installed in REG 021 on 11/15/12 at an invert elevation of -2.21 (overflow depth is 90 inches)
- The regulator is twin 84 inch wide steel plate weirs at elevation 5.29
- There is a duckbill on the overflow pipe
- CSO start and stop times are based on a depth greater than 90 inches at REG 021
- CSO volumes are calculated based on depth over the twin 84 inch weirs at REG 021 using the weir formula
- Check the SCADA data to confirm that the East Street Pump Station is pumping at maximum flow of 45 MGD during any CSO events
- Check the SCADA data to confirm that the Union Pump Station is pumping at maximum flow of 22 MGD during any CSO events

#### **OF-024 US and DS SEWER AND REG 024 WEIR**

- Meter OF-024 US Sewer was installed in the 84 inch wide by 69 inch high sewer upstream of REG 024 on 7/30/12 at an invert elevation of -2.22 (overflow depth is 83 inches)
- Meter OF-024 DS Sewer was installed in the 48 inch sewer downstream of REG 024 on 7/30/12 at an invert elevation of -3.19 (overflow depth is 99 inches)
- Meter 024 Weir was installed to measure weir depth at REG 024 on 10/31/12 at the weir elevation of 2.99. The weir elevation was raised 18 inches to elevation 4.49 on 7/21/17
- The regulator consists of three weirs each 4.5 feet wide
- A new influent gate was installed at the Boulevard Pump Station in March 2019 to prevent the level in the wetwell from reaching the walkways. When wetwell levels exceed 180 inches the gate starts to close to maintain wetwell levels at 180 inches
- CSO start and stop times are based on depths greater than 83 inches at Meter OF-024 US Sewer, depths greater than 99 inches at Meter OF-024 DS Sewer (verified by the Meter 024 Weir depths)
- CSO volumes are calculated by subtracting the Meter OF-024 DS flows from the Meter OF-024 US flows
- Check the SCADA data to confirm that the Boulevard Pump Station is pumping at maximum flow of 27 MGD during any CSO events and that the new influent gate is not causing an increase in CSO duration, average flow or volume.

#### **REG 025 (METERS State, Frontage, Columbus and weir) (CSO 025)**

- Four meters were installed in September 2013 to estimate CSOs at REG 025
- Meter State was installed in the 48 inch wide by 60 inch high sewer on State Street upstream of REG 025 at an invert of 3.87. Rim elevation is 15.35. Rim to invert is 138 inches.
- Meter Frontage was installed in the 30 inch sewer on North Frontage Road upstream of REG 025 at an invert of 1.95. Rim elevation is 16.45. Rim to invert is 174 inches.

- Meter Columbus was installed in the 30 inch sewer on Columbus Avenue in November 2013 at an invert of -1.78. Rim elevation is 9.95. Rim to invert is 141 inches.
- Meter REG 025 weir was installed in improved REG 025 in February 2019. Sensors are metering the depths above the overflow elevation on each side of the overflow weir
- The new overflow weir is nine feet long and is made up of stop logs at an overflow elevation of 14.50
- CSO or stormwater inflow start and stop times are estimated based on the depths at the overflow weir
- CSO or stormwater inflow volumes are estimated using the weir formula
- Check the SCADA data to confirm that the Union Pump Station is pumping at maximum flow of 22 MGD during any CSO events
- Check the SCADA data to confirm that the East Street Pump Station is pumping at maximum flow of 45 MGD during any CSO events

#### **REG 034 (METERS Temple, George, and weir) (CSO 025)**

- Three meters were installed in September 2013 to estimate CSOs at REG 034
- Meter Temple was installed in the 25 inch wide by 37 inch high sewer on Temple Street upstream of REG 034 at an invert of 12.52. Rim elevation is 20.95. Rim to invert is 102 inches.
- Meter George was installed in the 36 inch wide by 48 inch high sewer on George Street upstream of REG 034 at an invert of 11.89. Rim elevation is 20.45. Rim to invert is 103 inches.
- Meter REG 034 weir was installed in REG 034 in November 2013. Sensors are metering the depths on each side of the overflow weir above the overflow elevation
- The overflow weir consists of wood stop logs, 6.6 feet long. The overflow elevation was raised two feet by adding stop logs to elevation 13.65 on 8/1/14
- **CSO REGULATOR 034 WAS CLOSED IN JANUARY 2019**

#### **GNH1 SEWER AT TRUMAN TANK**

- Meter GNH1 Sewer was installed in the 72 inch wide by 64 inch high sewer downstream of the Truman Tank Diversion Chamber on 6/12/12 at an invert elevation of 0.25 (overflow depth is 36 inches)
- The regulator is a 10 foot bending weir at elevation 3.28 feet
- The SCADA system measures depths in each cell of the 5 MG tank
- Truman Tank activation start and stop times are based on a depth greater than 36 inches at Meter GNH1 Sewer and SCADA depths in the Truman Tank
- CSO storage volumes are calculated based on SCADA depths in the Truman Tank. Each foot of depth in each cell equates to 122,500 gallons.

**METER DATA**

**SUMMARY**

**MAY 2018 – APRIL 2019**

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - MAY 2018 THROUGH APRIL 2019**

<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>	<u>RAINFALL (IN)</u>	<u>METER MONTHS</u>
CSO 006	REGS 006 A, 006 B	26	6.683	56.83	12
CSO 005	REG 005	11	0.948	56.83	12
CSO 004	REG 004	26	4.297	56.83	12
CSO 003	REG 003	25	4.451	56.83	12
CSO 024	REG 024	7	2.515	56.83	12
CSO 009	REG 009	20	1.853	56.83	12
CSO 016	REG 016	35	12.440	56.83	12
CSO 015	REG 015	35	4.768	52.99	11
CSO 011	REGS 010A, 011, 026	15	6.379	56.83	12
CSO 025	REGS 025, 034	12	2.943	50.98	11
CSO 021	REG 021	15	6.649	56.83	12
CSO 020	REG 020	1	0.002	32.05	8
<b>TOTAL</b>		<b>228</b>	<b>53.928</b>		

# **METER DATA**

**APRIL 2019**

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - APRIL 2019**

**MONTHLY RAINFALL SUMMARY**

7.06 inches of rain (3.44 inches of rain in a typical month)

No snowfall

15 rain events (10 rain events in a typical month)

Two 6 month, one 3 month, and one 1 month storms, all other storms less than 1 month return frequency

<b>CSO NUMBER</b>	<b>REGULATOR NUMBERS</b>	<b>CSO EVENTS</b>	<b>CSO VOLUME (MG)</b>
CSO 006	REGS 006 A, 006 B	4	0.518
CSO 005	REG 005	1	0.014
CSO 004	REG 004	5	0.388
CSO 003	REG 003	4	0.415
CSO 024	REG 024	1	0.470
CSO 009	REG 009	4	0.073
CSO 016	REG 016	5	1.426
CSO 015	REG 015	5	0.424
CSO 011	REGS 010A, 011, 026	2	0.386
CSO 025	REGS 025	0	0.000
CSO 021	REG 021	4	1.082
CSO 020	REG 020	0	0.000
<b>TOTAL</b>		<b>35</b>	<b>5.196</b>



**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES**

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL (3)	CSO VOLUME (MG) BASED ON RAINFALL (2)	CSO EVENTS BASED ON MONTHS (3)	CSO VOLUME (MG) BASED ON MONTHS (2)	CSO EVENTS BASED ON MONTHS (4)	CSO VOLUME (MG) BASED ON MONTHS (4)
CSO 006	REGS 006 A, 006 B	16	4,991	19	5,744		
CSO 005	REG 005	7	0,672	9	0,774		
CSO 004	REG 004	19	3,679	22	4,235		
CSO 003	REG 003	19	2,719	22	3,129		
CSO 024	REG 024	6	2,334	7	2,687		
CSO 009	REG 009	16	1,303	19	1,499		
CSO 016	REG 016	20	7,730	23	8,897		
CSO 015	REG 015	25	4,065	29	4,678		
CSO 011	REGS 010A, 011, 026	11	4,842	13	5,573		
CSO 025	REGS 025, 034	8	2,842	9	3,202		
CSO 021	REG 021	12	7,484	14	8,613		
CSO 020	REG 020	2	0,010	2	0,010		
<b>TOTAL</b>		<b>160</b>	<b>42,662</b>	<b>183</b>	<b>49,028</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years  
 (2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years  
 (3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years  
 (4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 NPDES Permit Outfall #: 003  
 MONTH: April YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Cavg (MGD)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month	4/13/2019	6:40	7:40	1.00	1.254	0.052
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month	4/15/2019	5:55	6:15	0.33	2.252	0.051
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**						
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month	4/22/2019	16:45	17:20	0.58	1.714	0.042
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019-4/27/2019	21:20	0:15	2.92	2.387	0.290
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.415

Note: Overflow occurs when Interceptor level reaches 46"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
 NPDES Permit Outfall #: 004  
 MONTH: April YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month	4/13/2019	6:35	7:35	1.00	0.203	0.008
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month	4/15/2019	5:50	6:50	1.00	0.898	0.037
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**	4/20/2019	8:55	9:10	0.25	0.114	0.001
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month	4/22/2019	16:40	17:55	1.25	3.063	0.160
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019	15:30	23:40	8.17	0.536	0.182
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.388

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 Derby Ave..20 yrds East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: April YEAR: 2019  
 MONTH: 24  
 Average Low Temp: 72  
 Average High Temp: 706  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month						
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month						
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**						
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month						
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019	21:30	21:50	0.33	1.024	0.014
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.014

Note: Overflow occurs when Interceptor level reaches 71"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Whalley Ave. 30 yds from Fitch Street  
 NPDES Permit Outfall #: 006  
 MONTH: April YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month	4/13/2019	6:55	7:15	0.33	0.096	0.001
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month	4/15/2019	6:00	6:50	0.83	1.494	0.050
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**						
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month	4/22/2019	16:55	17:35	0.67	1.685	0.044
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019-4/27/2019	21:25	0:05	2.67	3.804	0.423
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.518

Note: Overflow occurs when Interceptor level reaches 27"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Grand Avenue & James Street  
 NPDES Permit Outfall #: 009

MONTH: April YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4:58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10:08	0.36	**						
3	4/8/2019	3:20	7:00	3:67	0.21	**						
4	4/9/2019	18:55	19:15	0:33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12:42	1.19	1 month						
6	4/14/2019	17:50	23:30	5:67	0.11	**						
7	4/15/2019	5:15	13:55	8:67	0.57	3 month		4/15/2019	5:50	6:10	0.33	0.201
8	4/18/2019	12:45	15:15	2:50	0.05	**						
9	4/20/2019	2:00	17:25	15:42	0.78	**		4/20/2019	8:40	8:50	0.17	0.117
10	4/21/2019	8:25	14:30	6:08	0.07	**						
11	4/22/2019	12:15	23:55	11:67	1.20	6 month		4/22/2019	16:30	17:10	0.67	0.773
12	4/26/2019	5:35	23:05	17:50	1.65	6 month						
13	4/27/2019	0:00	6:05	6:08	0.28	**						
14	4/28/2019	15:20	18:50	3:50	0.30	**						
15	4/30/2019	0:45	6:05	5:33	0.11	**		4/26/2019	15:15	22:00	6.75	0.171

TOTAL MONTH FLOW VOLUME = 0.073

Note: Overflow occurs when interceptor level reaches 30"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG                      547 East Street  
 LOCATION:                              010A

NPDES Permit Outfall #:

MONTH:                                      April                      YEAR:                      2019

Average Low Temp:                      24

Average High Temp:                      72

Measured Rainfall:                      7.06

Measured Snowfall:                      0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month						
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month						
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**						
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month						
12	4/26/2019	5:35	23:05	17.50	1.65	6 month						
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 62"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 011  
 LOCATION: April YEAR: 2019  
 NPDES Permit Outfall #: 24  
 MONTH: April YEAR: 2019  
 Average Low Temp: 72  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	4/3/2019	0:05	4:40	4.58	0.06	**					
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**					
3	4/8/2019	3:20	7:00	3.67	0.21	**					
4	4/9/2019	18:55	19:15	0.33	0.12	**					
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month					
6	4/14/2019	17:50	23:30	5.67	0.11	**					
7	4/15/2019	5:15	13:55	8.67	0.57	3 month					
8	4/18/2019	12:45	15:15	2.50	0.05	**					
9	4/20/2019	2:00	17:25	15.42	0.78	**					
10	4/21/2019	8:25	14:30	6.08	0.07	**					
11	4/22/2019	12:15	23:55	11.67	1.20	6 month					
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/22/2019	16:45	17:40	0.92	2.460
13	4/27/2019	0:00	6:05	6.08	0.28	**	4/26/2019	21:35	23:05	1.50	4.676
14	4/28/2019	15:20	18:50	3.50	0.30	**					
15	4/30/2019	0:45	6:05	5.33	0.11	**					

TOTAL MONTH FLOW VOLUME = 0.386



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: April YEAR: 2019  
 MONTH: 24  
 Average Low Temp: 72  
 Average High Temp: 7.06  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month						
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month						
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**						
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month	4/22/2019	16:45	17:40	0.92	2.460	0.094
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019	21:35	23:05	1.50	4.676	0.292
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.386

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 15 James Street  
 NPDES Permit Outfall #: 015  
 MONTH: April YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month	4/12/2019-4/13/2019	23:50	7:50	8.00	4.122	0.147
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month	4/15/2019	5:50	7:15	1.42	0.104	0.006
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**	4/20/2019	8:40	9:40	1.00	1.568	0.065
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month	4/22/2019	16:30	18:20	1.83	1.502	0.115
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019	15:20	23:30	8.17	2.604	0.091
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.424

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Int. River & Poplar  
 016  
 NPDES Permit Outfall #: April YEAR: 2019  
 MONTH: 24  
 Average Low Temp: 72  
 Average High Temp: 7.06  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT NO.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP			DURATION (hours)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month	4/12/2019-4/13/2019	23:30	8:00	8.50	0.807	0.286
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month	4/15/2019	5:45	7:25	1.67	3.326	0.231
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**	4/20/2019	8:35	9:40	1.08	1.027	0.046
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month	4/22/2019	16:25	18:35	2.17	4.090	0.369
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019	15:15	23:30	8.25	1.488	0.494
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 1.426

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Clifton and Quinmpiac  
 020  
 NPDES Permit Outfall #: April YEAR: 2019  
 MONTH: 24  
 Average Low Temp: 72  
 Average High Temp: 7.06  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		
1	4/3/2019	0:05	4:40	4.58	0.06	**					
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**					
3	4/8/2019	3:20	7:00	3.67	0.21	**					
4	4/9/2019	18:55	19:15	0.33	0.12	**					
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month					
6	4/14/2019	17:50	23:30	5.67	0.11	**					
7	4/15/2019	5:15	13:55	8.67	0.57	3 month					
8	4/18/2019	12:45	15:15	2.50	0.05	**					
9	4/20/2019	2:00	17:25	15.42	0.78	**					
10	4/21/2019	8:25	14:30	6.08	0.07	**					
11	4/22/2019	12:15	23:55	11.67	1.20	6 month					
12	4/26/2019	5:35	23:05	17.50	1.65	6 month					
13	4/27/2019	0:00	6:05	6.08	0.28	**					
14	4/28/2019	15:20	18:50	3.50	0.30	**					
15	4/30/2019	0:45	6:05	5.33	0.11	**					

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 NPDES Permit Outfall #: 021  
 MONTH: April YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT						CSO EVENT					
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Cavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month	4/13/2019	7:15	8:15	1.00	3.201	0.133
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month	4/15/2019	6:40	7:10	0.50	0.405	0.008
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**						
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month	4/22/2019	17:05	19:10	2.08	5.874	0.510
12	4/26/2019	5:35	23:05	17.50	1.65	6 month	4/26/2019-4/27/2019	21:55	0:15	2.33	4.434	0.431
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 1.082

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 LOCATION: Sea Street @ South Water Street  
 024

NPDES Permit Outfall #: 024  
 MONTH: April YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 7.06  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	4/3/2019	0:05	4:40	4:58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10:08	0.36	**						
3	4/8/2019	3:20	7:00	3:67	0.21	**						
4	4/9/2019	18:55	19:15	0:33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12:42	1.19	1 month						
6	4/14/2019	17:50	23:30	5:67	0.11	**						
7	4/15/2019	5:15	13:55	8:67	0.57	3 month						
8	4/18/2019	12:45	15:15	2:50	0.05	**						
9	4/20/2019	2:00	17:25	15:42	0.78	**						
10	4/21/2019	8:25	14:30	6:08	0.07	**						
11	4/22/2019	12:15	23:55	11:67	1.20	6 month						
12	4/26/2019	5:35	23:05	17:50	1.65	6 month						
13	4/27/2019	0:00	6:05	6:08	0.28	**						
14	4/28/2019	15:20	18:50	3:50	0.30	**						
15	4/30/2019	0:45	6:05	5:33	0.11	**						
<b>TOTAL MONTH</b>											<b>FLOW VOLUME =</b>	<b>0.470</b>

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
**LOCATION:** Intersection of State & N. Front Street  
**NPDES Permit Outfall #:** 025  
**MONTH:** April YEAR: 2019  
**Average Low Temp:** 24  
**Average High Temp:** 72  
**Measured Rainfall:** 7.06  
**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP			DURATION (hours)
1	4/3/2019	0:05	4:40	4.58	0.06	**						
2	4/5/2019-4/6/2019	16:05	2:10	10.08	0.36	**						
3	4/8/2019	3:20	7:00	3.67	0.21	**						
4	4/9/2019	18:55	19:15	0.33	0.12	**						
5	4/12/2019-4/13/2019	21:05	9:30	12.42	1.19	1 month						
6	4/14/2019	17:50	23:30	5.67	0.11	**						
7	4/15/2019	5:15	13:55	8.67	0.57	3 month						
8	4/18/2019	12:45	15:15	2.50	0.05	**						
9	4/20/2019	2:00	17:25	15.42	0.78	**						
10	4/21/2019	8:25	14:30	6.08	0.07	**						
11	4/22/2019	12:15	23:55	11.67	1.20	6 month						
12	4/26/2019	5:35	23:05	17.50	1.65	6 month						
13	4/27/2019	0:00	6:05	6.08	0.28	**						
14	4/28/2019	15:20	18:50	3.50	0.30	**						
15	4/30/2019	0:45	6:05	5.33	0.11	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 21"

# **METER DATA**

**MARCH 2019**



GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - MARCH 2019			
<b>MONTHLY RAINFALL SUMMARY</b>			
2.55 inches of rain (3.44 inches of rain in a typical month)			
12.6 inches of snowfall			
8 rain events (10 rain events in a typical month)			
One 3 month storm, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	0	0.000
CSO 005	REG 005	0	0.000
CSO 004	REG 004	0	0.000
CSO 003	REG 003	0	0.000
CSO 024	REG 024	0	0.000
CSO 009	REG 009	0	0.000
CSO 016	REG 016	1	0.078
CSO 015	REG 015	0	0.000
CSO 011	REGS 010A, 011, 026	0	0.000
CSO 025	REGS 025	0	0.000
CSO 021	REG 021	0	0.000
CSO 020	REG 020	0	0.000
<b>TOTAL</b>		<b>1</b>	<b>0.078</b>

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES**

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	16	5,209	18	5,837		
CSO 005	REG 005	8	0,752	9	0,843		
CSO 004	REG 004	19	3,926	21	4,399		
CSO 003	REG 003	19	2,645	22	2,964		
CSO 024	REG 024	7	2,537	8	2,843		
CSO 009	REG 009	17	1,455	19	1,630		
CSO 016	REG 016	20	7,691	22	8,617		
CSO 015	REG 015	25	4,203	28	4,710		
CSO 011	REGS 010A, 011, 026	11	5,209	13	5,836		
CSO 025	REGS 025, 034	10	3,093	10	3,388		
CSO 021	REG 021	12	8,567	14	9,599		
CSO 020	REG 020	3	0,017	3	0,017		
<b>TOTAL</b>		<b>163</b>	<b>45,287</b>	<b>182</b>	<b>50,663</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years

(2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years

(3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years

(4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 003  
 NPDES Permit Outfall #:   
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.60

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	3/1/2019	11:05	11:30	0.42	0.05	**					
2	3/2/2019	11:50	12:45	0.92	0.19	**					
3	3/3/2019	18:25	19:55	1.50	0.05	**					
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51	**					
6	3/15/2019	21:30	22:50	1.33	0.14	**					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**					
8	3/31/2019	12:15	17:50	5.58	0.30	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
 004  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	3/1/2019	11:05	11:30	0.42	0.05	**					
2	3/2/2019	11:50	12:45	0.92	0.19	**					
3	3/3/2019	18:25	19:55	1.50	0.05	**					
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51	**					
6	3/15/2019	21:30	22:50	1.33	0.14	**					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**					
8	3/31/2019	12:15	17:50	5.58	0.30	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: March YEAR: 2019  
 MONTH: 31  
 Average Low Temp: 47  
 Average High Temp: 2.55  
 Measured Rainfall: 12.6  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	3/1/2019	11:05	11:30	0.42	0.05	**					
2	3/2/2019	11:50	12:45	0.92	0.19	**					
3	3/3/2019	18:25	19:55	1.50	0.05	**					
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51	**					
6	3/15/2019	21:30	22:50	1.33	0.14	**					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**					
8	3/31/2019	12:15	17:50	5.58	0.30	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 71"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Whalley Ave. 30 yds from Fitch Street  
 NPDES Permit Outfall #: 006  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	3/1/2019	11:05	11:30	0.42	0.05	**						
2	3/2/2019	11:50	12:45	0.92	0.19	**						
3	3/3/2019	18:25	19:55	1.50	0.05	**						
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month						
5	3/10/2019	6:30	15:00	8.50	0.51	**						
6	3/15/2019	21:30	22:50	1.33	0.14	**						
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**						
8	3/31/2019	12:15	17:50	5.58	0.30	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 27"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Grand Avenue & James Street

**LOCATION:** 009

**NPDES Permit Outfall #:**

March YEAR: 2019

31

**Average Low Temp:**

47

**Average High Temp:**

2.55

**Measured Rainfall:**

12.6

**Measured Snowfall:**

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	3/1/2019	11:05	11:30	0.42	0.05	**					
2	3/2/2019	11:50	12:45	0.92	0.19	**					
3	3/3/2019	18:25	19:55	1.50	0.05	**					
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51	**					
6	3/15/2019	21:30	22:50	1.33	0.14	**					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**					
8	3/31/2019	12:15	17:50	5.58	0.30	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 30"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 547 East Street

LOCATION: 010A

NPDES Permit Outfall #:

MONTH: March YEAR: 2019

Average Low Temp: 31

Average High Temp: 47

Measured Rainfall: 2.55

Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	3/1/2019	11:05	11:30	0.42	0.05	**						
2	3/2/2019	11:50	12:45	0.92	0.19	**						
3	3/3/2019	18:25	19:55	1.50	0.05	**						
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month						
5	3/10/2019	6:30	15:00	8.50	0.51	**						
6	3/15/2019	21:30	22:50	1.33	0.14	**						
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**						
8	3/31/2019	12:15	17:50	5.58	0.30	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 62"



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 011  
 LOCATION:  
 NPDES Permit Outfall #:  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	3/1/2019	11:05	11:30	0.42	0.05	**					
2	3/2/2019	11:50	12:45	0.92	0.19	**					
3	3/3/2019	18:25	19:55	1.50	0.05	**					
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51	**					
6	3/15/2019	21:30	22:50	1.33	0.14	**					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**					
8	3/31/2019	12:15	17:50	5.58	0.30	**					

TOTAL MONTH FLOW VOLUME = 0.000

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 011  
 LOCATION:  
 NPDES Permit Outfall #:  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	3/1/2019	11:05	11:30	0.42	0.05	**					
2	3/2/2019	11:50	12:45	0.92	0.19	**					
3	3/3/2019	18:25	19:55	1.50	0.05	**					
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51	**					
6	3/15/2019	21:30	22:50	1.33	0.14	**					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**					
8	3/31/2019	12:15	17:50	5.58	0.30	**					

TOTAL MONTH FLOW VOLUME = 0.000

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 15 James Street  
 015  
 NPDES Permit Outfall #:  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q avg (MGD)	OUTFALL Q volume (MG)
1	3/1/2019	11:05	11:30	0.42	0.05	**						
2	3/2/2019	11:50	12:45	0.92	0.19	**						
3	3/3/2019	18:25	19:55	1.50	0.05	**						
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month						
5	3/10/2019	6:30	15:00	8.50	0.51	**						
6	3/15/2019	21:30	22:50	1.33	0.14	**						
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**						
8	3/31/2019	12:15	17:50	5.58	0.30	**						

TOTAL MONTH FLOW VOLUME = 0.000

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Int. River & Poplar  
 016

**LOCATION:**  
 NPDES Permit Outfall #:

**MONTH:** March YEAR: 2019

**Average Low Temp:** 31

**Average High Temp:** 47

**Measured Rainfall:** 2.55

**Measured Snowfall:** 12.6

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)
1	3/1/2019	11:05	11:30	0.42	0.05	**					
2	3/2/2019	11:50	12:45	0.92	0.19	**					
3	3/3/2019	18:25	19:55	1.50	0.05	**					
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51	**					
6	3/15/2019	21:30	22:50	1.33	0.14	**					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**	3/22/2019	1:20	2:25	1.08	1.718
8	3/31/2019	12:15	17:50	5.58	0.30	**					

TOTAL MONTH FLOW VOLUME = 0.078

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Clifton and Quinnpitac

**LOCATION:** 020

**NPDES Permit Outfall #:**

**MONTH:** March YEAR: 2019

**Average Low Temp:** 31

**Average High Temp:** 47

**Measured Rainfall:** 2.55

**Measured Snowfall:** 12.6

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	3/1/2019	11:05	11:30	0.42	0.05	**						
2	3/2/2019	11:50	12:45	0.92	0.19	**						
3	3/3/2019	18:25	19:55	1.50	0.05	**						
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month						
5	3/10/2019	6:30	15:00	8.50	0.51	**						
6	3/15/2019	21:30	22:50	1.33	0.14	**						
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**						
8	3/31/2019	12:15	17:50	5.58	0.30	**						

TOTAL MONTH FLOW VOLUME = 0.000

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 NPDES Permit Outfall #: 021  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	3/1/2019	11:05	11:30	0.42	0.05	**						
2	3/2/2019	11:50	12:45	0.92	0.19	**						
3	3/3/2019	18:25	19:55	1.50	0.05	**						
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month						
5	3/10/2019	6:30	15:00	8.50	0.51	**						
6	3/15/2019	21:30	22:50	1.33	0.14	**						
7	3/23/2019-3/22/2019	23:20	11:35	12.25	0.74	**						
8	3/31/2019	12:15	17:50	5.58	0.30	**						

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 LOCATION: Sea Street @ South Water Street  
 024  
 NPDES Permit Outfall #: 2019  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL FREQUENCY	DATE	START	STOP	DURATION (hours)	
1	3/1/2019	11:05	11:30	0.42	0.05 **					
2	3/2/2019	11:50	12:45	0.92	0.19 **					
3	3/3/2019	18:25	19:55	1.50	0.05 **					
4	3/4/2019	11:05	12:35	1.50	0.57 3 Month					
5	3/10/2019	6:30	15:00	8.50	0.51 **					
6	3/15/2019	21:30	22:50	1.33	0.14 **					
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74 **					
8	3/31/2019	12:15	17:50	5.58	0.30 **					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Intersection of State & N. Front Street  
 NPDES Permit Outfall #: 025  
 MONTH: March YEAR: 2019  
 Average Low Temp: 31  
 Average High Temp: 47  
 Measured Rainfall: 2.55  
 Measured Snowfall: 12.6

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	3/1/2019	11:05	11:30	0.42	0.05	**						
2	3/2/2019	11:50	12:45	0.92	0.19	**						
3	3/3/2019	18:25	19:55	1.50	0.05	**						
4	3/4/2019	11:05	12:35	1.50	0.57	3 Month						
5	3/10/2019	6:30	15:00	8.50	0.51	**						
6	3/15/2019	21:30	22:50	1.33	0.14	**						
7	3/21/2019-3/22/2019	23:20	11:35	12.25	0.74	**						
8	3/31/2019	12:15	17:50	5.58	0.30	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 21"



# **METER DATA**

**FEBRUARY 2019**

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - FEBRUARY 2019			
<b>MONTHLY RAINFALL SUMMARY</b>			
3.41 inches of rain (3.44 inches of rain in a typical month)			
4.4 inches of snowfall			
9 rain events (10 rain events in a typical month)			
Two 1 month storms, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	1	0.101
CSO 005	REG 005	0	0.000
CSO 004	REG 004	0	0.000
CSO 003	REG 003	0	0.000
CSO 024	REG 024	0	0.000
CSO 009	REG 009	0	0.000
CSO 016	REG 016	1	0.193
CSO 015	REG 015	1	0.064
CSO 011	REGS 010A, 011, 026	0	0.000
CSO 025	REGS 025	0	0.000
CSO 021	REG 021	0	0.000
CSO 020	REG 020	0	0.000
<b>TOTAL</b>		<b>3</b>	<b>0.358</b>

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES**

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	16	5,140	18	5,837		
CSO 005	REG 005	8	0,742	9	0,843		
CSO 004	REG 004	19	3,879	22	4,405		
CSO 003	REG 003	20	2,612	23	2,966		
CSO 024	REG 024	7	2,576	8	2,925		
CSO 009	REG 009	18	1,466	20	1,665		
CSO 016	REG 016	19	7,570	22	8,596		
CSO 015	REG 015	26	4,203	29	4,773		
CSO 011	REGS 010A, 011, 026	11	5,140	13	5,836		
CSO 025	REGS 025, 034	9	3,050	10	3,388		
CSO 021	REG 021	12	8,458	14	9,604		
CSO 020	REG 020	3	0,017	3	0,017		
<b>TOTAL</b>		<b>165</b>	<b>44,836</b>	<b>187</b>	<b>50,834</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years

(2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years

(3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years

(4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Orange Ave. @ Int. of Ella T. Grasso Blvd.  
**LOCATION:** 003  
**NPDES Permit Outfall #:**  
**MONTH:** February YEAR: 2019  
 Average Low Temp: 27  
 Average High Temp: 42  
 Measured Rainfall: 3.41  
 Measured Snowfall: 4.4

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	2/5/2019	7:25	7:30	0.08	0.01	**					
2	2/6/2019-2/7/2019	18:40	4:10	9.50	0.53	**					
3	2/8/2019	1:55	11:05	9.17	0.22	**					
4	2/12/2019	21:50	23:25	1.58	0.05	**					
5	2/13/2019	8:55	14:15	5.33	0.88	1 month					
6	2/18/2019	10:55	13:30	2.58	0.18	**					
7	2/21/2019	2:35	10:00	7.42	0.67	**					
8	2/24/2019	0:20	14:40	14.33	0.85	1 month					
9	2/28/2019	9:05	9:15	0.17	0.02	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG : Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
 LOCATION: 004  
 NPDES Permit Outfall #: February YEAR: 2019  
 MONTH: 27  
 Average Low Temp: 42  
 Average High Temp: 3.41  
 Measured Rainfall: 4.4  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	2/5/2019	7:25	7:30	0:08	0.01	**					
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**					
3	2/8/2019	1:55	11:05	9:17	0.22	**					
4	2/12/2019	21:50	23:25	1:58	0.05	**					
5	2/13/2019	8:55	14:15	5:33	0.88	1 month					
6	2/18/2019	10:55	13:30	2:58	0.18	**					
7	2/21/2019	2:35	10:00	7:42	0.67	**					
8	2/24/2019	0:20	14:40	14:33	0.85	1 month					
9	2/28/2019	9:05	9:15	0:17	0.02	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: February YEAR: 2019  
 MONTH: 27  
 Average Low Temp: 42  
 Average High Temp: 3,41  
 Measured Rainfall: 4.4  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Clave (MGD)	OUTFALL Q volume (MG)
1	2/5/2019	7:25	7:30	0.08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9.50	0.53	**						
3	2/8/2019	1:55	11:05	9.17	0.22	**						
4	2/12/2019	21:50	23:25	1.58	0.05	**						
5	2/13/2019	8:55	14:15	5.33	0.88	1 month						
6	2/18/2019	10:55	13:30	2.58	0.18	**						
7	2/21/2019	2:35	10:00	7.42	0.67	**						
8	2/24/2019	0:20	14:40	14.33	0.85	1 month						
9	2/28/2019	9:05	9:15	0.17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 71"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Whatley Ave. 30 yds from Fitch Street  
 NPDES Permit Outfall #: 006  
 MONTH: February YEAR: 2019  
 Average Low Temp: 27  
 Average High Temp: 42  
 Measured Rainfall: 3.41  
 Measured Snowfall: 4.4

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q avg (MGD)	OUTFALL Q volume (MG)
1	2/5/2019	7:25	7:30	0.08	0.01 **							
2	2/6/2019-2/7/2019	18:40	4:10	9.50	0.53 **							
3	2/8/2019	1:55	11:05	9.17	0.22 **							
4	2/12/2019	21:50	23:25	1.58	0.05 **							
5	2/13/2019	8:55	14:15	5.33	0.88 1 month							
6	2/18/2019	10:55	13:30	2.58	0.18 **							
7	2/21/2019	2:35	10:00	7.42	0.67 **							
8	2/24/2019	0:20	14:40	14.33	0.85 1 month		2/24/2019	8:05	10:15	2.17	1.18	0.101
9	2/28/2019	9:05	9:15	0.17	0.02 **							

TOTAL MONTH FLOW VOLUME = 0.101

Note: Overflow occurs when Interceptor level reaches 27"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Grand Avenue & James Street  
 009

NPDES Permit Outfall #:

MONTH: February YEAR: 2019

Average Low Temp:

27

Average High Temp:

42

Measured Rainfall:

3.41

Measured Snowfall:

4.4

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Q. avg (MGD)
1	2/5/2019	7:25	7:30	0:08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**						
3	2/8/2019	1:55	11:05	9:17	0.22	**						
4	2/12/2019	21:50	23:25	1:58	0.05	**						
5	2/13/2019	8:55	14:15	5:33	0.88	1 month						
6	2/18/2019	10:55	13:30	2:58	0.18	**						
7	2/21/2019	2:35	10:00	7:42	0.67	**						
8	2/24/2019	0:20	14:40	14:33	0.85	1 month						
9	2/28/2019	9:05	9:15	0:17	0.02	**						
<b>TOTAL MONTH</b>										<b>FLOW VOLUME =</b>		0.000

Note: Overflow occurs when Interceptor level reaches 30"



**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: 547 East Street  
 010A  
 NPDES Permit Outfall #:  
 MONTH: February YEAR: 2019  
 Average Low Temp: 27  
 Average High Temp: 42  
 Measured Rainfall: 3.41  
 Measured Snowfall: 4.4

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	2/5/2019	7:25	7:30	0:08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**						
3	2/8/2019	1:55	11:05	9:17	0.22	**						
4	2/12/2019	21:50	23:25	1:58	0.05	**						
5	2/13/2019	8:55	14:15	5:33	0.88	1 month						
6	2/18/2019	10:55	13:30	2:58	0.18	**						
7	2/21/2019	2:35	10:00	7:42	0.67	**						
8	2/24/2019	0:20	14:40	14:33	0.85	1 month						
9	2/28/2019	9:05	9:15	0:17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 62"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 011  
 LOCATION:  
 NPDES Permit Outfall #:  
 MONTH: February YEAR: 2019  
 Average Low Temp: 27  
 Average High Temp: 42  
 Measured Rainfall: 3.41  
 Measured Snowfall: 4.4

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	2/5/2019	7:25	7:30	0.08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9.50	0.53	**						
3	2/8/2019	1:55	11:05	9.17	0.22	**						
4	2/12/2019	21:50	23:25	1.58	0.05	**						
5	2/13/2019	8:55	14:15	5.33	0.88	1 month						
6	2/18/2019	10:55	13:30	2.58	0.18	**						
7	2/21/2019	2:35	10:00	7.42	0.67	**						
8	2/24/2019	0:20	14:40	14.33	0.85	1 month						
9	2/28/2019	9:05	9:15	0.17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.000

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 011  
 LOCATION:  
 NPDES Permit Outfall #: February YEAR: 2019  
 MONTH: 27  
 Average Low Temp: 42  
 Average High Temp: 3.41  
 Measured Rainfall: 4.4  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	
1	2/5/2019	7:25	7:30	0:08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**						
3	2/8/2019	1:55	11:05	9:17	0.22	**						
4	2/12/2019	21:50	23:25	1:58	0.05	**						
5	2/13/2019	8:55	14:15	5:33	0.88	1 month						
6	2/18/2019	10:55	13:30	2:58	0.18	**						
7	2/21/2019	2:35	10:00	7:42	0.67	**						
8	2/24/2019	0:20	14:40	14:33	0.85	1 month						
9	2/28/2019	9:05	9:15	0:17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.000

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 15 James Street  
 LOCATION: 015  
 NPDES Permit Outfall #:   
 MONTH: February YEAR: 2019  
 Average Low Temp: 27  
 Average High Temp: 42  
 Measured Rainfall: 3.41  
 Measured Snowfall: 4.4

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)	
1	2/5/2019	7:25	7:30	0:08	0.01 **								
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53 **								
3	2/8/2019	1:55	11:05	9:17	0.22 **								
4	2/12/2019	21:50	23:25	1:58	0.05 **								
5	2/13/2019	8:55	14:15	5:33	0.88 1 month								
6	2/18/2019	10:55	13:30	2:58	0.18 **								
7	2/21/2019	2:35	10:00	7:42	0.67 **								
8	2/24/2019	0:20	14:40	14:33	0.85 1 month		2/24/2019	7:30	9:30	2:00	0.771	0.064	
9	2/28/2019	9:05	9:15	0:17	0.02 **								
											TOTAL MONTH	FLOW VOLUME =	0.064

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Int. River & Poplar  
 016  
 NPDES Permit Outfall #:   
 MONTH: February YEAR: 2019  
 Average Low Temp: 27  
 Average High Temp: 42  
 Measured Rainfall: 3.41  
 Measured Snowfall: 4.4

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q. volume (MG)
1	2/5/2019	7:25	7:30	0.08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9.50	0.53	**						
3	2/8/2019	1:55	11:05	9.17	0.22	**						
4	2/12/2019	21:50	23:25	1.58	0.05	**						
5	2/13/2019	8:55	14:15	5.33	0.88	1 month						
6	2/18/2019	10:55	13:30	2.58	0.18	**						
7	2/21/2019	2:35	10:00	7.42	0.67	**						
8	2/24/2019	0:20	14:40	14.33	0.85	1 month	2/24/2019	6:40	9:55	3.25	1.425	0.193
9	2/28/2019	9:05	9:15	0.17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.193

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

Clifton and Quininiplac

LOCATION:

020

NPDES Permit Outfall #:

2019

February YEAR:

27

Average Low Temp:

42

Average High Temp:

3.41

Measured Rainfall:

4.4

Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	2/5/2019	7:25	7:30	0:08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**						
3	2/8/2019	1:55	11:05	9:17	0.22	**						
4	2/12/2019	21:50	23:25	1:58	0.05	**						
5	2/13/2019	8:55	14:15	5:33	0.88	1 month						
6	2/18/2019	10:55	13:30	2:58	0.18	**						
7	2/21/2019	2:35	10:00	7:42	0.67	**						
8	2/24/2019	0:20	14:40	14:33	0.85	1 month						
9	2/28/2019	9:05	9:15	0:17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.000

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 NPDES Permit Outfall #: 021  
 MONTH: February YEAR: 2019  
 Average Low Temp: 27  
 Average High Temp: 42  
 Measured Rainfall: 3.41  
 Measured Snowfall: 4.4

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	2/5/2019	7:25	7:30	0:08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**						
3	2/8/2019	1:55	11:05	9:17	0.22	**						
4	2/12/2019	21:50	23:25	1:58	0.05	**						
5	2/13/2019	8:55	14:15	5:33	0.88	1 month						
6	2/18/2019	10:55	13:30	2:58	0.18	**						
7	2/21/2019	2:35	10:00	7:42	0.67	**						
8	2/24/2019	0:20	14:40	14:33	0.85	1 month						
9	2/28/2019	9:05	9:15	0:17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Sea Street @ South Water Street

024

**LOCATION:**

**NPDES Permit Outfall #:**

**MONTH:** February

**YEAR:** 2019

**Average Low Temp:** 27

**Average High Temp:** 42

**Measured Rainfall:** 3.41

**Measured Snowfall:** 4.4

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q <sub>avg</sub> (MGD)	OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP			DURATION (hours)
1	2/5/2019	7:25	7:30	0:08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**						
3	2/8/2019	1:55	11:05	9:17	0.22	**						
4	2/12/2019	21:50	23:25	1:58	0.05	**						
5	2/13/2019	8:55	14:15	5:33	0.88	1 month						
6	2/18/2019	10:55	13:30	2:58	0.18	**						
7	2/21/2019	2:35	10:00	7:42	0.67	**						
8	2/24/2019	0:20	14:40	14:33	0.85	1 month						
9	2/28/2019	9:05	9:15	0:17	0.02	**						

TOTAL MONTH FLOW VOLUME =

0.000

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS



**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Intersection of State & N. Front Street  
 025  
 NPDES Permit Outfall #: February YEAR: 2019  
 MONTH: 27  
 Average Low Temp: 42  
 Average High Temp: 3.41  
 Measured Rainfall: 4.4  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	2/5/2019	7:25	7:30	0:08	0.01	**						
2	2/6/2019-2/7/2019	18:40	4:10	9:50	0.53	**						
3	2/8/2019	1:55	11:05	9:17	0.22	**						
4	2/12/2019	21:50	23:25	1:58	0.05	**						
5	2/13/2019	8:55	14:15	5:33	0.88	1 month						
6	2/18/2019	10:55	13:30	2:58	0.18	**						
7	2/21/2019	2:35	10:00	7:42	0.67	**						
8	2/24/2019	0:20	14:40	14:33	0.85	1 month						
9	2/28/2019	9:05	9:15	0:17	0.02	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 21"

# **METER DATA**

**JANUARY 2019**

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - JANUARY 2019			
<u>MONTHLY RAINFALL SUMMARY</u>			
3.66 inches of rain (3.44 inches of rain in a typical month)			
3.0 inches of snowfall			
11 rain events (10 rain events in a typical month)			
One 3 month storm, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	1	0.816
CSO 005	REG 005	1	0.010
CSO 004	REG 004	1	0.546
CSO 003	REG 003	1	0.147
CSO 024	REG 024	1	0.161
CSO 009	REG 009	1	0.069
CSO 016	REG 016	1	1.337
CSO 015	REG 015	1	0.358
CSO 011	REGS 010A, 011, 026	1	0.252
CSO 025	REGS 025	0	0
CSO 021	REG 021	1	0.612
CSO 020	REG 020	0	0
<b>TOTAL</b>		<b>10</b>	<b>4.308</b>

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES**

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	
CSO 006	REGS 006 A, 006 B	16	5,230	18	5,786		
CSO 005	REG 005	8	0,762	9	0,843		
CSO 004	REG 004	19	3,981	22	4,405		
CSO 003	REG 003	20	2,681	23	2,966		
CSO 024	REG 024	7	2,644	8	2,925		
CSO 009	REG 009	19	1,505	21	1,565		
CSO 016	REG 016	19	7,683	22	8,499		
CSO 015	REG 015	26	4,285	29	4,741		
CSO 011	REGS 010A, 011, 026	11	5,275	13	5,836		
CSO 025	REGS 025, 034	10	3,136	10	3,388		
CSO 021	REG 021	13	8,683	15	9,606		
CSO 020	REG 020	3	0,017	3	0,017		
<b>TOTAL</b>		<b>169</b>	<b>45,865</b>	<b>186</b>	<b>50,658</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years  
 (2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years  
 (3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years  
 (4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 NPDES Permit Outfall #: 003  
 MONTH: January YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 3.66  
 Measured Snowfall: 3.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	13:05	16:40	3.58	0.984	0.147
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.147

Note: Overflow occurs when Interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Ella T. Grasso Blvd. - 23 yds North of Legion Ave.

**LOCATION:** 004

**NPDES Permit Outfall #:**

**MONTH:** January YEAR: 2019

**Average Low Temp:** 24

**Average High Temp:** 72

**Measured Rainfall:** 3.66

**Measured Snowfall:** 3

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	11:40	16:50	5.17	2.538	0.546
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.546

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 LOCATION: Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 005

**NPDES Permit Outfall #:**  
 MONTH: January YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 3.66  
 Measured Snowfall: 3

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	13:50	14:20	0.50	0.502	0.010
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.010

Note: Overflow occurs when Interceptor level reaches 71"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
**LOCATION:** Whalley Ave. 30 yds from Fitch Street  
 006  
**NPDES Permit Outfall #:**  
**MONTH:** January YEAR: 2019  
 24  
**Average Low Temp:** 72  
**Average High Temp:** 72  
**Measured Rainfall:** 3.66  
**Measured Snowfall:** 3

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	11:35	17:10	5.58	3.925	0.816
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.816

Note: Overflow occurs when Interceptor level reaches 27"



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Grand Avenue & James Street  
 009

NPDES Permit Outfall #:

MONTH: January YEAR: 2019

Average Low Temp:

24

Average High Temp:

72

Measured Rainfall:

3.66

Measured Snowfall:

3

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q avg (MGD)	
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	12:50	14:35	1.75	0.944	0.069
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.069

Note: Overflow occurs when Interceptor level reaches 30"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 547 East Street  
 LOCATION: 010A

NPDES Permit Outfall #:

MONTH: January YEAR: 2019

Average Low Temp: 24

Average High Temp: 72

Measured Rainfall: 3.66

Measured Snowfall: 3

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	14:05	14:25	0.33	0.351	0.005
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.005

Note: Overflow occurs when Interceptor level reaches 62"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 011  
 LOCATION: January YEAR: 2019  
 NPDES Permit Outfall #: 24  
 MONTH: 72  
 Average Low Temp: 3.66  
 Average High Temp: 3  
 Measured Rainfall:  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	January		2019	15:05	-48440.92	3.098	0.247
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.247

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: January YEAR: 2019  
 MONTH: 24  
 Average Low Temp: 72  
 Average High Temp: 3.66  
 Measured Rainfall: 3  
 Measured Snowfall: 3

EVENT No.	RAINFALL EVENT						CSO EVENT					
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	13:10	15:05	1.92	3.449	0.252
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.252

Sum of 010A and 011

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** 15 James Street

**LOCATION:** 015

**NPDES Permit Outfall #:**

January YEAR: 2019

24

72

3.66

3

**Average Low Temp:**

**Average High Temp:**

**Measured Rainfall:**

**Measured Snowfall:**

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	11:35	16:45	5.17	1.662	0.358
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME =

0.358

Expected capacity of siphon is between 24 and 30 MGD.

Weir Height 40.5"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Int. River & Poplar 016  
 NPDES Permit Outfall #: 016  
 MONTH: January YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 3.66  
 Measured Snowfall: 3

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	11:30	16:55	5.42	5.922	1.337
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 1.337

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG Clifton and Quinippiac

LOCATION: 020

NPDES Permit Outfall #:

MONTH: January YEAR: 2019

24

72

3.66

3

Average Low Temp:

Average High Temp:

Measured Rainfall:

Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month						
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 021

NPDES Permit: Outfall #:  
 MONTH: January YEAR: 2019  
 Average Low Temp: 24  
 Average High Temp: 72  
 Measured Rainfall: 3.66  
 Measured Snowfall: 3

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	12:20	14:30		6.780	0.612
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.612



**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 LOCATION: Sea Street @ South Water Street  
 024  
 MONTH: January YEAR: 2019  
 NPDES Permit Outfall #: 24  
 Average Low Temp: 72  
 Average High Temp: 3.66  
 Measured Rainfall: 3  
 Measured Snowfall: 3

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q avg (MGD)	OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP			DURATION (hours)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month	1/24/2019	13:50	14:10	0.33	11.614	0.161
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						
<b>TOTAL MONTH</b>											<b>FLOW VOLUME =</b>	<b>0.161</b>

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Intersection of State & N. Front Street  
 025  
 MONTH: January YEAR: 2019  
 NPDES Permit Outfall #: 24  
 Average Low Temp: 72  
 Average High Temp: 3.66  
 Measured Rainfall: 3  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q <sub>avg</sub> (MGD)	OUTFALL volume (MG)
1	1/3/2019	1:10	13:20	12.17	0.02	**						
2	1/5/2019	2:45	16:40	13.92	0.63	**						
3	1/6/2019	12:15	12:45	0.50	0.03	**						
4	1/8/2019	5:10	20:45	15.58	0.06	**						
5	1/9/2019	0:20	2:15	1.92	0.21	**						
6	1/18/2019	10:30	11:25	0.92	0.02	**						
7	1/20/2019	3:30	15:20	11.83	0.68	**						
8	1/22/2019	13:05	13:10	0.08	0.01	**						
9	1/23/2019	10:50	16:45	5.92	0.13	**						
10	1/24/2019	2:10	17:20	15.17	1.53	3 month						
11	1/29/2019-1/30/2019	18:25	0:30	6.08	0.34	**						

TOTAL MONTH FLOW VOLUME = 0.000

# **METER DATA**

**DECEMBER 2018**

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - DECEMBER 2018**

**MONTHLY RAINFALL SUMMARY**

5.85 inches of rain (3.44 inches of rain in a typical month)

0.5 inches of snowfall

10 rain events (10 rain events in a typical month)

One 6 month storm, three 1 month storms, all other storms less than 1 month return frequency

<b>CSO NUMBER</b>	<b>REGULATOR NUMBERS</b>	<b>CSO EVENTS</b>	<b>CSO VOLUME (MG)</b>
CSO 006	REGS 006 A, 006 B	3	1.587
CSO 005	REG 005	2	0.136
CSO 004	REG 004	3	1.152
CSO 003	REG 003	3	0.993
CSO 024	REG 024	0	0.000
CSO 009	REG 009	1	0.150
CSO 016	REG 016	4	1.724
CSO 015	REG 015	4	0.556
CSO 011	REGS 010A, 011, 026	2	0.884
CSO 025	REGS 025, 034	METER REMOVED 11/27/18	METER REMOVED 11/27/18
CSO 021	REG 021	3	1.174
CSO 020	REG 020	METER REMOVED 8/13/18	METER REMOVED 8/13/18
<b>TOTAL</b>		<b>25</b>	<b>8.356</b>

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

CSO FLOW MONITORING PROGRAM

METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	15	4.879	17	5.378		
CSO 005	REG 005	8	0.760	9	0.838		
CSO 004	REG 004	20	3.751	22	4.135		
CSO 003	REG 003	21	2.646	23	2.917		
CSO 024	REG 024	7	2.580	8	2.844		
CSO 009	REG 009	18	1.479	20	1.631		
CSO 016	REG 016	20	7.208	22	7.946		
CSO 015	REG 015	27	4.231	30	4.664		
CSO 011	REGS 010A, 011, 026	11	5.180	12	5.710		
CSO 025	REGS 025, 034	10	3.147	10	3.388		
CSO 021	REG 021	13	8.452	15	9.318		
CSO 020	REG 020	3	0.017	3	0.017		
<b>TOTAL</b>		<b>169</b>	<b>44.312</b>	<b>186</b>	<b>48.766</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years

(2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years

(3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years

(4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 LOCATION: 003  
 NPDES Permit Outfall #: 2018  
 MONTH: December YEAR: 2018  
 Average Low Temp: 30  
 Average High Temp: 44  
 Measured Rainfall: 5.85  
 Measured Snowfall: 0.5

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month					
2	12/3/2018	5:25	5:30	0.08	0.01	**					
3	12/15/2018	1:20	10:10	8.83	0.05	**					
4	12/16/2018	5:30	22:00	16.50	0.52	**					
5	12/17/2018	14:10	14:15	0.08	0.02	**					
6	12/20/2018	19:20	22:25	3.08	0.13	**					
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	4:30	12:40	8.17	1.309
8	12/24/2018	9:45	11:05	1.33	0.07	**					
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2018	12:10	14:50	2.67	2.627
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month	12/31/2018-1/1/2019	21:05	2:30	5.42	1.134

TOTAL MONTH FLOW VOLUME = 0.993

Note: Overflow occurs when Interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
**LOCATION:** 004  
**MONTH:** December YEAR: 2018  
 30  
 44  
**Average Low Temp:**  
**Average High Temp:** 5.85  
**Measured Rainfall:**  
**Measured Snowfall:** 0.5

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	11:45	14:10	2.42	10.701	1.078
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2018	12:10	15:05	2.92	0.445	0.054
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month	12/31/2018-1/1/2019	21:20	1:00	3.67	0.131	0.020

TOTAL MONTH FLOW VOLUME = 1.152

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: 005  
 MONTH: December YEAR: 2018  
 Average Low Temp: 30  
 Average High Temp: 44  
 Measured Rainfall: 5.85  
 Measured Snowfall: 0.5

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q.volum (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month					
2	12/3/2018	5:25	5:30	0.08	0.01	**					
3	12/15/2018	1:20	10:10	8.83	0.05	**					
4	12/16/2018	5:30	22:00	16.50	0.52	**					
5	12/17/2018	14:10	14:15	0.08	0.02	**					
6	12/20/2018	19:20	22:25	3.08	0.13	**					
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	11:40	12:45	1.08	2.755
8	12/24/2018	9:45	11:05	1.33	0.07	**					
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2018	13:20	13:55	0.58	0.483
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month					

TOTAL MONTH FLOW VOLUME = 0.136

Note: Overflow occurs when Interceptor level reaches 71"



**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Whalley Ave. 30 yds from Fitch Street  
 NPDES Permit Outfall #: 006  
 MONTH: December YEAR: 2018  
 Average Low Temp: 30  
 Average High Temp: 44  
 Measured Rainfall: 5.85  
 Measured Snowfall: 0.5

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qvavg (MGD)	OUTFALL Q volume (MG)
1	12/1/2018-12/2/2018	21:55	20:45	22:83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	11:30	19:35	8.08	4.344	1.171
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2018	12:35	15:30	2.92	2.894	0.360
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month	12/31/2018-1/1/2019	21:30	1:50	4.33	0.336	0.056

TOTAL MONTH FLOW VOLUME = 1.587

Note: Overflow occurs when Interceptor level reaches 27"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Grand Avenue & James Street

**LOCATION:** 009

**NPDES Permit Outfall #:**

**MONTH:** December **YEAR:** 2018

**Average Low Temp:**

30

**Average High Temp:**

44

**Measured Rainfall:**

5.85

**Measured Snowfall:**

0.5

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	11:40	12:50	1.17	3.089	0.150
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month						
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month						

TOTAL MONTH FLOW VOLUME = 0.150

**Note:** Overflow occurs when Interceptor level reaches 30"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** 547 East Street

**LOCATION:** 010A

**NPDES Permit Outfall #:**

**MONTH:** December YEAR: 2018

**Average Low Temp:** 30

**Average High Temp:** 44

**Measured Rainfall:** 5.85

**Measured Snowfall:** 0.5

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	12:10	13:05	0.92	3.919	0.150
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month						
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month						

**TOTAL MONTH FLOW VOLUME =** 0.150

**Note:** Overflow occurs when Interceptor level reaches 62"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 011  
 LOCATION: December 2018  
 NPDES Permit Outfall #: 30  
 MONTH: December 44  
 Average Low Temp: 5.85  
 Average High Temp: 0.5  
 Measured Rainfall:  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month					
2	12/3/2018	5:25	5:30	0.08	0.01	**					
3	12/15/2018	1:20	10:10	8.83	0.05	**					
4	12/16/2018	5:30	22:00	16.50	0.52	**					
5	12/17/2018	14:10	14:15	0.08	0.02	**					
6	12/20/2018	19:20	22:25	3.08	0.13	**					
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	11:55	13:30	1.58	7.643
8	12/24/2018	9:45	11:05	1.33	0.07	**					
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2019	13:30	14:45	1.25	4.413
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month					

TOTAL MONTH FLOW VOLUME = 0.734

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 011  
 NPDES Permit Outfall #: December YEAR: 2018  
 MONTH: 30  
 Average Low Temp: 44  
 Average High Temp: 5.85  
 Measured Rainfall: 0.5  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q avg (MGD)	OUTFALL Q volume (MG)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	11:55	13:30	1.58	11.562	0.654
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2018	13:30	14:45	1.25	4.413	0.230
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month						

TOTAL MONTH FLOW VOLUME = 0.884

Sum of 010A and 011

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG                      15 James Street  
 LOCATION:                              015  
 NPDES Permit Outfall #:            December                      2018  
 MONTH:                                      30  
 Average Low Temp:                    44  
 Average High Temp:                   5.85  
 Measured Rainfall:                    0.5  
 Measured Snowfall:

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Clavg Q (MGD)	OUTFALL Q volume (MG)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month	12/2/2018	4:50	6:05	1.25	1.428	0.074
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	4:10	13:30	9.33	3.817	0.272
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2018	11:55	15:30	3.58	0.788	0.118
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month	12/31/2018-1/1/2019	21:00	1:05	4.08	0.538	0.092

TOTAL MONTH FLOW VOLUME = 0.556

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

int. River & Poplar  
016

LOCATION:

NPDES Permit Outfall #: \_\_\_\_\_

MONTH:

December YEAR: 2018

Average Low Temp: 30

Average High Temp: 44

Measured Rainfall: 5.85

Measured Snowfall: 0.5

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Qavg (MGD)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month	12/2/2018	5:05	5:45	0.67	0.939	0.026
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month	12/21/2018	4:05	13:20	9.25	1.418	0.547
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month	12/28/2018	11:50	15:30	3.67	4.749	0.726
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month	12/31/2018-1/1/2019	20:55	1:05	4.17	2.446	0.425

TOTAL MONTH FLOW VOLUME =

1.724

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Clifton and Quinmipiac  
 020  
 NPDES Permit Outfall #: 2018  
 MONTH: December YEAR: 2018  
 Average Low Temp: 30  
 Average High Temp: 44  
 Measured Rainfall: 5.85  
 Measured Snowfall: 0.5

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month						
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month						
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month						

Meters OF-020 Sewer and OF-020 Overflow were removed on 8/13/18 to allow construction of project CWF 2016-02.

TOTAL MONTH FLOW VOLUME = 0.000



**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 NPDES Permit Outfall #: 021  
 MONTH: December YEAR: 2018  
 Average Low Temp: 30  
 Average High Temp: 44  
 Measured Rainfall: 5.85  
 Measured Snowfall: 0.5

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	12/1/2018-12/2/2018	21:55	20:45	22:83	1.05	1 month						
2	12/3/2018	5:25	5:30	0:08	0.01	**						
3	12/15/2018	1:20	10:10	8:83	0.05	**						
4	12/16/2018	5:30	22:00	16:50	0.52	**						
5	12/17/2018	14:10	14:15	0:08	0.02	**						
6	12/20/2018	19:20	22:25	3:08	0.13	**						
7	12/21/2018	1:35	19:05	17:50	1.62	6 month	12/21/2018	12:10	14:40	2:50	9.412	0.980
8	12/24/2018	9:45	11:05	1:33	0.07	**						
9	12/28/2018	6:05	18:25	12:33	1.12	1 month	12/28/2018	13:10	15:10	2:00	2.076	0.173
10	12/31/2018-1/1/2019	17:00	5:10	12:17	1.26	1 month	12/31/2018	22:35	23:20	0:75	0.665	0.021

TOTAL MONTH FLOW VOLUME = 1.174

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Sea Street @ South Water Street

**LOCATION:** 024

**NPDES Permit Outfall #:**

**MONTH:** December **YEAR:** 2018

**Average Low Temp:** 30

**Average High Temp:** 44

**Measured Rainfall:** 5.85

**Measured Snowfall:** 0.5

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q <sub>avg</sub> (MGD)	OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		
1	12/1/2018-12/2/2018	21:55	20:45	22:83	1.05	1 month					
2	12/3/2018	5:25	5:30	0.08	0.01	**					
3	12/15/2018	1:20	10:10	8.83	0.05	**					
4	12/16/2018	5:30	22:00	16.50	0.52	**					
5	12/17/2018	14:10	14:15	0.08	0.02	**					
6	12/20/2018	19:20	22:25	3.08	0.13	**					
7	12/21/2018	1:35	19:05	17.50	1.62	6 month					
8	12/24/2018	9:45	11:05	1.33	0.07	**					
9	12/28/2018	6:05	18:25	12.33	1.12	1 month					
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Intersection of State & N. Front Street  
 025  
**LOCATION:**  
**NPDES Permit Outfall #:**  
**MONTH:** December YEAR: 2018  
 Average Low Temp: 30  
 Average High Temp: 44  
 Measured Rainfall: 5.85  
 Measured Snowfall: 0.5

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month						
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month						
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 21"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

George and Temple  
Regulator 34

**LOCATION:**  
NPDES Permit Outfall #:

**MONTH:** December **YEAR:** 2018

**Average Low Temp:** 30

**Average High Temp:** 44

**Measured Rainfall:** 5.85

**Measured Snowfall:** 0.5

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Qvave (MGD)	OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP			DURATION (hours)
1	12/1/2018-12/2/2018	21:55	20:45	22.83	1.05	1 month						
2	12/3/2018	5:25	5:30	0.08	0.01	**						
3	12/15/2018	1:20	10:10	8.83	0.05	**						
4	12/16/2018	5:30	22:00	16.50	0.52	**						
5	12/17/2018	14:10	14:15	0.08	0.02	**						
6	12/20/2018	19:20	22:25	3.08	0.13	**						
7	12/21/2018	1:35	19:05	17.50	1.62	6 month						
8	12/24/2018	9:45	11:05	1.33	0.07	**						
9	12/28/2018	6:05	18:25	12.33	1.12	1 month						
10	12/31/2018-1/1/2019	17:00	5:10	12.17	1.26	1 month						

Meter OF-034 Weir was removed on 11/27/18 to allow construction of project CWF 2016-05.  
Regulator 034 was closed in January 2019.

TOTAL MONTH  
FLOW VOLUME =

0.000

**METER DATA**

**NOVEMBER 2018**

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - NOVEMBER 2018			
<u>MONTHLY RAINFALL SUMMARY</u>			
6.73 inches of rain (3.44 inches of rain in a typical month)			
4.60 inches of snowfall			
9 rain events (10 rain events in a typical month)			
One 3 month storm, four 1 month storms, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	2	0.406
CSO 005	REG 005	0	0.000
CSO 004	REG 004	1	0.012
CSO 003	REG 003	2	0.339
CSO 024	REG 024	0	0.000
CSO 009	REG 009	0	0.000
CSO 016	REG 016	5	0.581
CSO 015	REG 015	6	0.897
CSO 011	REGS 010A, 011, 026	1	0.319
CSO 025	REGS 025, 034	0	0.000
CSO 021	REG 021	3	1.692
CSO 020	REG 020	METER REMOVED 8/13/18	METER REMOVED 8/13/18
<b>TOTAL</b>		<b>20</b>	<b>4.246</b>

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

CSO FLOW MONITORING PROGRAM

METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(3)</sup>	CSO EVENTS BASED ON MONTHS <sup>(4)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	15	4,291	16	4,585		
CSO 005	REG 005	7	0,721	8	0,770		
CSO 004	REG 004	19	3,331	20	3,559		
CSO 003	REG 003	21	2,280	23	2,436		
CSO 024	REG 024	7	2,662	8	2,844		
CSO 009	REG 009	19	1,456	20	1,556		
CSO 016	REG 016	19	6,630	20	7,084		
CSO 015	REG 015	26	4,173	28	4,459		
CSO 011	REGS 010A, 011, 026	10	4,931	11	5,268		
CSO 025	REGS 025, 034	9	3,039	10	3,247		
CSO 021	REG 021	12	8,172	13	8,731		
CSO 020	REG 020	3	0,017	3	0,016		
<b>TOTAL</b>		<b>164</b>	<b>41,687</b>	<b>175</b>	<b>44,535</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years  
 (2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years  
 (3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years  
 (4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 003  
 NPDES Permit Outfall #: 2018  
 MONTH: November YEAR: 2018  
 Average Low Temp: 37  
 Average High Temp: 50  
 Measured Rainfall: 6.73  
 Measured Snowfall: 4.60

EVENT NO.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	11/2/2018	3:00	3:20	0.33	0.13 **						
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85 1 month						
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76 **						
4	11/9/2018	16:10	22:55	6.75	0.90 1 month						
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45 3 month	11/13/2018	9:05	10:15	1.17	4.608	0.224
6	11/16/2018	0:40	8:55	8.25	0.53 **						
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99 1 month						
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09 1 month	11/26/2018	20:45	21:20	0.58	4.748	0.115
9	11/30/2018	14:50	19:30	4.67	0.03 **						

TOTAL MONTH FLOW VOLUME = 0.339

Note: Overflow occurs when Interceptor level reaches 46"



**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Ella T. Grasso Blvd. - 23 yds North of Legion Ave.

**LOCATION:** 004

**NPDES Permit Outfall #:**

**MONTH:** November YEAR: 2018

**Average Low Temp:** 37

**Average High Temp:** 50

**Measured Rainfall:** 6.73

**Measured Snowfall:** 4.6

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qave (MGD)	OUTFALL Q volume (MG)
1	11/2/2018	3:00	3:20	0.33	0.13 **							
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85 1 month							
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76 **							
4	11/9/2018	16:10	22:55	6.75	0.90 1 month							
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45 3 month		11/13/2018	9:15	10:10	0.92	0.304	0.012
6	11/16/2018	0:40	8:55	8.25	0.53 **							
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99 1 month							
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09 1 month							
9	11/30/2018	14:50	19:30	4.67	0.03 **							

TOTAL MONTH FLOW VOLUME = 0.012

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: 2018  
 MONTH: November YEAR: 2018  
 Average Low Temp: 37  
 Average High Temp: 50  
 Measured Rainfall: 6.73  
 Measured Snowfall: 4.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	11/2/2018	3:00	3:20	0.33	0.13	**					
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85	1 month					
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76	**					
4	11/9/2018	16:10	22:55	6.75	0.90	1 month					
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45	3 month					
6	11/16/2018	0:40	8:55	8.25	0.53	**					
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99	1 month					
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09	1 month					
9	11/30/2018	14:50	19:30	4.67	0.03	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 71"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Whalley Ave. 30 yds from Fitch Street  
 006  
 NPDES Permit Outfall #: 37  
 MONTH: November YEAR: 2018  
 Average Low Temp: 50  
 Average High Temp: 6.73  
 Measured Rainfall: 4.6  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q.volum (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	11/2/2018	3:00	3:20	0.33	0.13 **						
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85 1 month						
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76 **						
4	11/9/2018	16:10	22:55	6.75	0.90 1 month						
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45 3 month						
6	11/16/2018	0:40	8:55	8.25	0.53 **						
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99 1 month						
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09 1 month						
9	11/30/2018	14:50	19:30	4.67	0.03 **						
TOTAL MONTH										FLOW VOLUME =	0.406

Note: Overflow occurs when Interceptor level reaches 27"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Grand Avenue & James Street

**LOCATION:** 009

**NPDES Permit Outfall #:**

**MONTH:** November YEAR: 2018

**Average Low Temp:** 37

**Average High Temp:** 50

**Measured Rainfall:** 6.73

**Measured Snowfall:** 4.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q avg (MGD)	OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP			DURATION (hours)
1	11/2/2018	3:00	3:20	0.33	0.13	**						
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85	1 month						
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76	**						
4	11/9/2018	16:10	22:55	6.75	0.90	1 month						
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45	3 month						
6	11/16/2018	0:40	8:55	8.25	0.53	**						
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99	1 month						
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09	1 month						
9	11/30/2018	14:50	19:30	4.67	0.03	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when interceptor level reaches 30"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

547 East Street  
010A

NPDES Permit Outfall #:

November

2018

MONTH:

37

50

Average Low Temp:

6.73

4.6

Average High Temp:

4.6

Measured Rainfall:

4.6

Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q <sub>avg</sub> (MGD)	OUTFALL Q volume (MG)
1	11/2/2018	3:00	3:20	0:33	0.13	**						
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85	1 month						
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76	**						
4	11/9/2018	16:10	22:55	6.75	0.90	1 month						
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45	3 month						
6	11/16/2018	0:40	8:55	8.25	0.53	**						
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99	1 month						
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09	1 month						
9	11/30/2018	14:50	19:30	4.67	0.03	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 62"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: November 2018  
 MONTH: 37  
 Average Low Temp: 50  
 Average High Temp: 6.73  
 Measured Rainfall: 4.6  
 Measured Snowfall:

EVENT No.	RAINFALL EVENT					CSO EVENT						
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	11/2/2018	3:00	3:20	0.33	0.13	**						
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85	1 month						
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76	**						
4	11/9/2018	16:10	22:55	6.75	0.90	1 month						
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45	3 month	11/13/2018	9:25	10:40	1.25	6.124	0.319
6	11/16/2018	0:40	8:55	8.25	0.53	**						
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99	1 month						
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09	1 month						
9	11/30/2018	14:50	19:30	4.67	0.03	**						

TOTAL MONTH FLOW VOLUME = 0.319

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: November 2018  
 MONTH: 37  
 Average Low Temp: 50  
 Average High Temp: 6.73  
 Measured Rainfall: 4.6  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	11/2/2018	3:00	3:20	0.33	0.13 **							
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85 1 month							
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76 **							
4	11/9/2018	16:10	22:55	6.75	0.90 1 month							
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45 3 month							
6	11/16/2018	0:40	8:55	8.25	0.53 **							
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99 1 month							
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09 1 month							
9	11/30/2018	14:50	19:30	4.67	0.03 **							
TOTAL MONTH											0.319	
FLOW VOLUME =											0.319	

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 15 James Street  
 015  
 NPDES Permit Outfall #: 37  
 MONTH: November YEAR: 2018  
 Average Low Temp: 50  
 Average High Temp: 6.73  
 Measured Rainfall:  
 Measured Snowfall: 4.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	11/2/2018	3:00	3:20	0.33	0.13 **		11/2/2018-11/3/2018	22:45	6:30	7.75	0.232	0.075
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85 1 month			14:00	14:40	0.67	2.623	0.073
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76 **			18:30	21:15	2.75	1.648	0.189
4	11/9/2018	16:10	22:55	6.75	0.90 1 month			8:25	10:40	2.25	3.446	0.323
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45 3 month			23:35	3:35	4.00	1.156	0.193
6	11/16/2018	0:40	8:55	8.25	0.53 **			18:55	21:15	2.33	0.448	0.044
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99 1 month							
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09 1 month							
9	11/30/2018	14:50	19:30	4.67	0.03 **							

TOTAL MONTH FLOW VOLUME = 0.897

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Int. River & Poplar 016  
 NPDES Permit Outfall #: 2018  
 MONTH: November 37  
 Average Low Temp: 50  
 Average High Temp: 6.73  
 Measured Rainfall: 4.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Q.ave (MGD)
1	11/2/2018	3:00	3:20	0.33	0.13	**	11/2/2018	22:40	23:20	0.67	0.505	0.014
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85	1 month	11/6/2018	13:55	14:25	0.50	0.018	0.000
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76	**	11/9/2018	20:30	21:00	0.50	0.490	0.010
4	11/9/2018	16:10	22:55	6.75	0.90	1 month	11/13/2018	8:55	11:00	2.08	5.840	0.507
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45	3 month						
6	11/16/2018	0:40	8:55	8.25	0.53	**						
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99	1 month	11/26/2018	18:40	21:20	2.67	0.452	0.050
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09	1 month						
9	11/30/2018	14:50	19:30	4.67	0.03	**						

TOTAL MONTH FLOW VOLUME = 0.581

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 638 Long Wharf Drive

LOCATION: 021

NPDES Permit Outfall #:

November YEAR: 2018

MONTH: 37

Average Low Temp: 50

Average High Temp: 6.73

Measured Rainfall: 4.6

Measured Snowfall:

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Qavg (MGD)
1	11/2/2018	3:00	3:20	0.33	0.13 **							
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85 1 month							
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76 **							
4	11/9/2018	16:10	22:55	6.75	0.90 1 month							
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45 3 month		11/13/2018	9:20	11:20	2.00	4.577	0.381
6	11/16/2018	0:40	8:55	8.25	0.53 **							
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99 1 month		11/25/2018	0:40	2:30	1.83	15.633	1.194
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09 1 month		11/26/2018	20:20	21:40	1.33	2.101	0.117
9	11/30/2018	14:50	19:30	4.67	0.03 **							

TOTAL MONTH FLOW VOLUME = 1.692

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

Sea Street @ South Water Street  
024

LOCATION:

NPDES Permit Outfall #:

MONTH:

November

YEAR:

2018

Average Low Temp:

Average High Temp:

Measured Rainfall:

Measured Snowfall:

37

50

6.73

4.6

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Cavg (MGD)	OUTFALL Q volume (MG)
1	11/2/2018	3:00	3:20	0.33	0.13	**						
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85	1 month						
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76	**						
4	11/9/2018	16:10	22:55	6.75	0.90	1 month						
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45	3 month						
6	11/16/2018	0:40	8:55	8.25	0.53	**						
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99	1 month						
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09	1 month						
9	11/30/2018	14:50	19:30	4.67	0.03	**						
<b>TOTAL MONTH</b>											<b>FLOW VOLUME =</b>	<b>0.000</b>

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

Intersection of State & N. Front Street  
025

**LOCATION:**

**NPDES Permit Outfall #:**

**MONTH:**

**Average Low Temp:**

**Average High Temp:**

**Measured Rainfall:**

**Measured Snowfall:**

November 2018  
37  
50  
6.73  
4.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL FREQUENCY	DATE	START	STOP	DURATION (hours)	
1	11/2/2018	3:00	3:20	0.33	0.13 **					
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85 1 month					
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76 **					
4	11/9/2018	16:10	22:55	6.75	0.90 1 month					
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45 3 month					
6	11/16/2018	0:40	8:55	8.25	0.53 **					
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99 1 month					
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09 1 month					
9	11/30/2018	14:50	19:30	4.67	0.03 **					

TOTAL MONTH  
FLOW VOLUME = 0.000

Note: Overflow occurs when interceptor level reaches 21"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

George and Temple  
Regulator 34

NPDES Permit Outfall #:

November 2018

Average Low Temp:

37

Average High Temp:

50

Measured Rainfall:

6.73

Measured Snowfall:

4.6

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	11/2/2018	3:00	3:20	0.33	0.13	**					
2	11/2/2018-11/3/2018	20:45	9:10	12.42	0.85	1 month					
3	11/5/2018-11/6/2018	9:45	21:30	35.75	0.76	**					
4	11/9/2018	16:10	22:55	6.75	0.90	1 month					
5	11/12/2018-11/13/2018	23:55	12:05	12.17	1.45	3 month					
6	11/16/2018	0:40	8:55	8.25	0.53	**					
7	11/24/2018-11/25/2018	21:30	3:25	5.92	0.99	1 month					
8	11/26/2018-11/27/2018	15:20	4:50	13.50	1.09	1 month					
9	11/30/2018	14:50	19:30	4.67	0.03	**					

TOTAL MONTH FLOW VOLUME = 0.000

# **METER DATA**

**OCTOBER 2018**

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - OCTOBER 2018			
<b>MONTHLY RAINFALL SUMMARY</b>			
4.56 inches of rain (3.44 inches of rain in a typical month)			
No snowfall			
8 rain events (10 rain events in a typical month)			
Two 6 month storms, one 1 month storm, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	2	0.259
CSO 005	REG 005	1	0.017
CSO 004	REG 004	2	0.009
CSO 003	REG 003	2	0.151
CSO 024	REG 024	0	0.000
CSO 009	REG 009	3	0.180
CSO 016	REG 016	3	0.732
CSO 015	REG 015	2	0.211
CSO 011	REGS 010A, 011, 026	2	0.112
CSO 025	REGS 025, 034	2	0.110
CSO 021	REG 021	0	0.000
CSO 020	REG 020	METER REMOVED 8/13/18	METER REMOVED 8/13/18
<b>TOTAL</b>		<b>19</b>	<b>1.781</b>

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

CSO FLOW MONITORING PROGRAM

METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	15	4,396	15	4,530		
CSO 005	REG 005	7	0,747	8	0,770		
CSO 004	REG 004	20	3,529	21	3,637		
CSO 003	REG 003	23	2,610	24	2,690		
CSO 024	REG 024	8	3,141	9	3,237		
CSO 009	REG 009	20	1,515	21	1,561		
CSO 016	REG 016	17	6,971	18	7,183		
CSO 015	REG 015	24	3,892	25	4,010		
CSO 011	REGS 010A, 011, 026	11	5,132	11	5,289		
CSO 025	REGS 025, 034	10	3,155	11	3,251		
CSO 021	REG 021	12	7,946	12	8,188		
CSO 020	REG 020	3	0,016	3	0,015		
<b>TOTAL</b>		<b>167</b>	<b>43,034</b>	<b>173</b>	<b>44,343</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years  
 (2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years  
 (3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years  
 (4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years



**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 003  
 NPDES Permit Outfall #: 49  
 MONTH: October YEAR: 2018  
 Average Low Temp: 64  
 Average High Temp: 4.56  
 Measured Rainfall: 0.00  
 Measured Snowfall: 0.00

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:45	20:10	0.42	5.583	0.097
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:35	13:50	0.25	5.148	0.054
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.151

Note: Overflow occurs when Interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Ella T. Grasso Blvd. - 23 yds North of Legion Ave.

**LOCATION:** 004

**NPDES Permit Outfall #:**

**MONTH:** October YEAR: 2018

**Average Low Temp:** 49

**Average High Temp:** 64

**Measured Rainfall:** 4.56

**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:40	20:15	0.58	0.263	0.006
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:40	13:55	0.25	0.333	0.003
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.009

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 005  
**LOCATION:**  
**NPDES Permit Outfall #:**  
**MONTH:** October YEAR: 2018  
 49  
 64  
 4.56  
**Average Low Temp:**  
**Average High Temp:**  
**Measured Rainfall:**  
**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:40	20:05	0.42	0.999	0.017
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month						
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.017

Note: Overflow occurs when Interceptor level reaches 71"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

Whalley Ave. 30 yds from Fitch Street

006

**LOCATION:**  
**NPDES Permit Outfall #:**

**MONTH:**

October

2018

**Average Low Temp:**

49

**Average High Temp:**

64

**Measured Rainfall:**

4.56

**Measured Snowfall:**

0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q avg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:35	20:55	1.33	5.467	0.105
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:40	14:20	0.67	5.576	0.154
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH  
 FLOW VOLUME =

0.259

**Note:** Overflow occurs when interceptor level reaches 27"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Grand Avenue & James Street  
 009

**LOCATION:**  
**NPDES Permit Outfall #:**  
**MONTH:**  
 Average Low Temp:  
 Average High Temp:  
 Measured Rainfall:  
 Measured Snowfall:

October 2018  
 49  
 64  
 4.56  
 0

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:40	20:05	0.42	0.825	0.014
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:20	17:05	3.75	0.170	0.027
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month	10/27/2018	12:35	15:05	2.50	1.336	0.139
8	10/29/2018	1:00	15:20	14.33	0.31	**						
<b>TOTAL MONTH</b>											<b>FLOW VOLUME =</b>	<b>0.180</b>

Note: Overflow occurs when Interceptor level reaches 30"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 547 East Street

LOCATION: 010A

NPDES Permit Outfall #:

MONTH: October YEAR: 2018

Average Low Temp: 49

Average High Temp: 64

Measured Rainfall: 4.56

Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month						
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month						
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 62"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: October YEAR: 2018  
 MONTH: 49  
 Average Low Temp: 64  
 Average High Temp: 4.56  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Qavg (MGD)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:45	20:30	0.75	1.989	0.062
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:35	14:10	0.58	2.067	0.050
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.112

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011

NPDES Permit Outfall #: 49

MONTH: October

YEAR: 2018

Average Low Temp: 64

Average High Temp: 4.56

Measured Rainfall: 0

Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:45	20:30	0.75	1.989	0.062
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:35	14:10	0.58	2.067	0.050
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.112

Sum of 010A and 011



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 15 James Street  
 LOCATION: 015  
 NPDES Permit Outfall #: 015  
 MONTH: October YEAR: 2018  
 Average Low Temp: 49  
 Average High Temp: 64  
 Measured Rainfall: 4.56  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:45	20:40	0.92	3.744	0.143
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:20	17:35	4.25	0.384	0.068
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						
TOTAL MONTH											0.211	
FLOW VOLUME =												

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG Int. River & Poplar

LOCATION: 016

NPDES Permit Outfall #:

MONTH: October YEAR: 2018

Average Low Temp: 49

Average High Temp: 64

Measured Rainfall: 4.56

Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q.volum (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Q.vg (MGD)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:45	20:30	0.75	10.599	0.331
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:20	17:35	4.25	2.222	0.393
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month	10/29/2018	6:20	6:45	0.42	0.461	0.008
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.732

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

638 Long Wharf Drive

021

**LOCATION:**  
**NPDES Permit Outfall #:**

**MONTH:**

**Average Low Temp:**

**Average High Temp:**

**Measured Rainfall:**

**Measured Snowfall:**

October      YEAR:      2018

49

64

4.56

0

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month					
2	10/8/2018	20:30	20:35	0.08	0.01	**					
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month					
4	10/13/2018	7:00	10:45	3.75	0.10	**					
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**					
6	10/23/2018	18:45	19:15	0.50	0.09	**					
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month					
8	10/29/2018	1:00	15:20	14.33	0.31	**					

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
**LOCATION:** Sea Street @ South Water Street  
**NPDES Permit Outfall #:** 024  
**MONTH:** October      **YEAR:** 2018  
**Average Low Temp:** 49  
**Average High Temp:** 64  
**Measured Rainfall:** 4.56  
**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month					
2	10/8/2018	20:30	20:35	0.08	0.01	**					
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month					
4	10/13/2018	7:00	10:45	3.75	0.10	**					
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**					
6	10/23/2018	18:45	19:15	0.50	0.09	**					
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month					
8	10/29/2018	1:00	15:20	14.33	0.31	**					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
**LOCATION:** Intersection of State & N. Front Street  
**NPDES Permit Outfall #:** 025  
**MONTH:** October      **YEAR:** 2018  
**Average Low Temp:** 49  
**Average High Temp:** 64  
**Measured Rainfall:** 4.56  
**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q Avg (MGD)	OUTFALL volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month					
2	10/8/2018	20:30	20:35	0.08	0.01	**					
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month					
4	10/13/2018	7:00	10:45	3.75	0.10	**					
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**					
6	10/23/2018	18:45	19:15	0.50	0.09	**					
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month					
8	10/29/2018	1:00	15:20	14.33	0.31	**					

**TOTAL MONTH FLOW VOLUME =** 0.000

**Note:** Overflow occurs when Interceptor level reaches 21"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

George and Temple  
Regulator 34

LOCATION:

NPDES Permit Outfall #:

MONTH:

Average Low Temp:

Average High Temp:

Measured Rainfall:

Measured Snowfall:

October 2018

49

64

4.56

0

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	10/2/2018-10/3/2018	16:55	3:25	10.50	1.21	6 Month	10/2/2018	19:40	19:55	0.25	6.783	0.071
2	10/8/2018	20:30	20:35	0.08	0.01	**						
3	10/11/2018-10/12/2018	12:30	6:35	18.08	1.70	6 Month	10/11/2018	13:25	13:45	0.33	2.798	0.039
4	10/13/2018	7:00	10:45	3.75	0.10	**						
5	10/15/2018-10/16/2018	7:55	1:35	17.67	0.13	**						
6	10/23/2018	18:45	19:15	0.50	0.09	**						
7	10/27/2018-10/28/2018	2:30	3:20	24.83	1.01	1 Month						
8	10/29/2018	1:00	15:20	14.33	0.31	**						

TOTAL MONTH FLOW VOLUME = 0.110

**METER DATA**

**SEPTEMBER 2018**

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - SEPTEMBER 2018			
<u>MONTHLY RAINFALL SUMMARY</u>			
7.64 inches of rain (3.44 inches of rain in a typical month)			
No snowfall			
10 rain events (10 rain events in a typical month)			
One 5 year storm, two 2 year storms, one 1 month storm, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	2	1.403
CSO 005	REG 005	2	0.588
CSO 004	REG 004	3	1.312
CSO 003	REG 003	3	0.987
CSO 024	REG 024	2	0.632
CSO 009	REG 009	4	0.530
CSO 016	REG 016	4	2.642
CSO 015	REG 015	4	0.750
CSO 011	REGS 010A, 011, 026	2	1.690
CSO 025	REGS 025, 034	3	1.005
CSO 021	REG 021	2	0.989
CSO 020	REG 020	METER REMOVED 8/13/18	METER REMOVED 8/13/18
<b>TOTAL</b>		<b>31</b>	<b>12.528</b>



GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

CSO FLOW MONITORING PROGRAM

METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR CSO EVENTS BASED ON RAINFALL <sup>(2)</sup>	TYPICAL YEAR CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	TYPICAL YEAR CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	TYPICAL YEAR CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	15	4,373	15	4,456
CSO 005	REG 005	7	0,747	7	0,762
CSO 004	REG 004	20	3,619	21	3,687
CSO 003	REG 003	23	2,766	24	2,818
CSO 024	REG 024	9	3,325	9	3,387
CSO 009	REG 009	20	1,501	20	1,530
CSO 016	REG 016	17	7,300	18	7,437
CSO 015	REG 015	25	4,031	26	4,107
CSO 011	REGS 010A, 011, 026	10	5,341	11	5,441
CSO 025	REGS 025, 034	9	3,137	10	3,196
CSO 021	REG 021	12	8,202	13	8,357
CSO 020	REG 020	2	0,014	3	0,015
<b>TOTAL</b>		<b>167</b>	<b>44,342</b>	<b>171</b>	<b>45,175</b>

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years  
 (2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years  
 (3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years  
 (4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 003  
**LOCATION:**  
**NPDES Permit Outfall #:**  
**MONTH:** September YEAR: 2018  
 Average Low Temp: 58  
 Average High Temp: 82  
 Measured Rainfall: 7.64  
 Measured Snowfall: 0.00

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Q. avg (MGD)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	17:45	18:30	0.75	5.012	0.157
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year	9/12/2018	15:35	15:45	0.17	3.554	0.025
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	11:20	21:15	9.92	1.949	0.805
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 0.987

Note: Overflow occurs when Interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
 NPDES Permit Outfall #: 004  
 MONTH: September YEAR: 2018  
 Average Low Temp: 58  
 Average High Temp: 82  
 Measured Rainfall: 7.64  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Q avg (MGD)
1	9/6/2018	17:25	18:20	0.92	1.31	1.5 Year	9/6/2018	17:45	19:00	1.25	4.725	0.246
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year						
6	9/18/2018	2:35	16:00	13.42	0.43	**	9/18/2018	16:00	16:20	0.33	0.432	0.006
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	10:40	20:00	9.33	2.726	1.060
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 1.312

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 NPDES Permit Outfall #: 005  
 MONTH: September YEAR: 2018  
 Average Low Temp: 58  
 Average High Temp: 82  
 Measured Rainfall: 7.64  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	15 Year	9/6/2018	17:45	18:20	0.58	11.977	0.291
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year						
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	18:30	18:45	0.25	28.491	0.297
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 0.588

Note: Overflow occurs when Interceptor level reaches 71"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Whalley Ave.. 30 yds from Fitch Street  
 NPDES Permit Outfall #: 006  
 MONTH: September YEAR: 2018  
 Average Low Temp: 58  
 Average High Temp: 82  
 Measured Rainfall: 7.64  
 Measured Snowfall: 0

EVENT NO.	DATE	RAINFALL EVENT					CSO EVENT					OUTFALL Q. volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)		
1	9/6/2018	17:25	18:20	0.92	1.31	1.5 Year	17:45	19:00	1.25	8.322	0.291	
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year						
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	16:30	3:10	10.67	2.601	1.112	
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 1.403

Note: Overflow occurs when Interceptor level reaches 27"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Grand Avenue & James Street

NPDES Permit Outfall #: 009

MONTH: September YEAR: 2018

Average Low Temp: 58

Average High Temp: 82

Measured Rainfall: 7.64

Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Cavg Q volume (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	17:45	18:20	0.58	9.897	0.241
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year	9/12/2018	15:10	15:50	0.67	1.733	0.048
6	9/18/2018	2:35	16:00	13.42	0.43	**	9/18/2018	13:20	16:05	2.75	0.097	0.011
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	17:05	20:40	3.58	1.542	0.230
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						
											TOTAL MONTH	0.580
											FLOW VOLUME =	

Note: Overflow occurs when Interceptor level reaches 30"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: September YEAR: 2018  
 MONTH: 58  
 Average Low Temp: 82  
 Average High Temp: 7.64  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	17:45	19:05	1.33	1.489	0.083
2	9/8/2018	15:50	17:50	2.00	0.08	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year						
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	18:10	21:00	2.83	14.654	1.607
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 1.690

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 15 James Street  
 NPDES Permit Outfall #: 015  
 MONTH: September YEAR: 2018  
 Average Low Temp: 58  
 Average High Temp: 82  
 Measured Rainfall: 7.64  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT					CSO EVENT						
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Cavg (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	17:50	19:00	1.17	0.233	0.011
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year	9/12/2018	15:05	16:30	1.42	2.442	0.144
6	9/18/2018	2:35	16:00	13.42	0.43	**	9/18/2018	13:15	16:35	3.33	0.660	0.092
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	9:25	21:10	11.75	0.338	0.503
9	9/25/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						
TOTAL MONTH											FLOW VOLUME =	0.750

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

Int. River & Poplar  
016

LOCATION:  
NPDES Permit Outfall #:

MONTH: September YEAR: 2018

Average Low Temp: 58

Average High Temp: 82

Measured Rainfall: 7.64

Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Qavg (MGD)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	17:45	18:25	0.67	19.598	0.544
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year	9/12/2018	15:05	16:35	1.50	14.170	0.886
6	9/18/2018	2:35	16:00	13.42	0.43	**	9/18/2018	13:10	16:45	3.58	0.949	0.142
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	10:40	21:10	10.50	2.446	1.070
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 2.642

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 021

NPDES Permit Outfall #:

MONTH: September YEAR: 2018

Average Low Temp: 58

Average High Temp: 82

Measured Rainfall: 7.64

Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	18:05	19:00	0.92	6.297	0.241
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year						
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	17:25	21:40	4.25	4.222	0.748
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 0.989

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Sea Street @ South Water Street  
 NPDES Permit Outfall #: 024  
 MONTH: September YEAR: 2018  
 Average Low Temp: 58  
 Average High Temp: 82  
 Measured Rainfall: 7.64  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Cave (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	17:50	18:15	0.42	9.046	0.157
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year						
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	17:00	22:25	5.42	2.105	0.475
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME =

0.632

Note: Overflow occurs when Interceptor level reaches 83" in US & 95" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LDG Intersection of State & N. Front Street  
 LOCATION: 025  
 NPDES Permit Outfall #: September YEAR: 2018  
 MONTH: 58  
 Average Low Temp: 82  
 Average High Temp: 7.64  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year						
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year						
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year						
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.46	**						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 21"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: George and Temple Regulator 34  
 NPDES Permit Outfall #: 2018  
 MONTH: September  
 Average Low Temp: 58  
 Average High Temp: 82  
 Measured Rainfall: 7.64  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT					CSO EVENT						
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	9/6/2018	17:25	18:20	0.92	1.31	5 Year	9/6/2018	17:40	18:15	0.58	20.280	0.563
2	9/8/2018	15:50	17:50	2.00	0.03	**						
3	9/10/2018-9/11/2018	0:40	2:25	25.75	0.82	**						
4	9/11/2018	15:05	15:55	0.83	0.28	1 Month						
5	9/12/2018-9/13/2018	14:15	2:05	11.83	1.50	2 Year	9/12/2018	15:35	15:40	0.08	0.449	0.002
6	9/18/2018	2:35	16:00	13.42	0.43	**						
7	9/20/2018	21:10	21:15	0.08	0.01	**						
8	9/25/2018-9/26/2018	6:10	5:10	23.00	2.71	2 Year	9/25/2018	17:05	19:25	2.33	4.526	0.440
9	9/26/2018	22:25	23:00	0.58	0.09	**						
10	9/28/2018	4:15	8:55	4.67	0.45	**						

TOTAL MONTH FLOW VOLUME = 1.005

# **METER DATA**

**AUGUST 2018**

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - AUGUST 2018			
<u>MONTHLY RAINFALL SUMMARY</u>			
4.14 inches of rain (3.44 inches of rain in a typical month)			
No snowfall			
10 rain events (10 rain events in a typical month)			
One 6 month storm, three 1 month storms, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	4	0.257
CSO 005	REG 005	1	0.075
CSO 004	REG 004	4	0.110
CSO 003	REG 003	4	0.475
CSO 024	REG 024	1	0.099
CSO 009	REG 009	3	0.141
CSO 016	REG 016	4	0.743
CSO 015	REG 015	3	0.219
CSO 011	REGS 010A, 011, 026	1	0.295
CSO 012	REGS 012A, 012B, 028	0	0.000
CSO 025	REGS 025, 034	1	0.171
CSO 021	REG 021	0	0.000
CSO 020	REG 020	0	0.000
<b>TOTAL</b>		<b>26</b>	<b>2.585</b>

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

CSO FLOW MONITORING PROGRAM

METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	15	3,983	14	3,754		
CSO 005	REG 005	6	0,496	6	0,463		
CSO 004	REG 004	21	3,217	20	3,032		
CSO 003	REG 003	24	2,471	23	2,329		
CSO 024	REG 024	8	3,259	8	3,071		
CSO 009	REG 009	20	1,343	19	1,266		
CSO 016	REG 016	17	6,574	16	6,196		
CSO 015	REG 015	25	3,983	24	3,754		
CSO 011	REGS 010A, 011, 026	10	4,877	10	4,596		
CSO 012	REGS 012A, 012B, 028	6	0,246	6	0,232		
CSO 025	REGS 025, 034	8	2,857	8	2,693		
CSO 021	REG 021	12	8,342	12	7,862		
CSO 020	REG 020	3	0,015	3	0,014		
<b>TOTAL</b>		<b>173</b>	<b>41,649</b>	<b>163</b>	<b>39,252</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years

(2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years

(3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years

(4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years



**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 003  
 NPDES Permit Outfall #: August YEAR: 2018  
 MONTH: 71  
 Average Low Temp: 86  
 Average High Temp: 4.14  
 Measured Rainfall: 0.00  
 Measured Snowfall:

EVENT NO.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month	8/1/2018	16:40	17:05	0.42	2.615	0.045
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**	8/8/2018	19:40	20:10	0.50	0.558	0.012
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	8/12/2018	14:25	21:50	7.42	1.287	0.398
6	8/13/2018	9:25	16:40	7.25	0.77	1 month	8/13/2018	13:25	14:05	0.67	0.794	0.020
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.475

Note: Overflow occurs when interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
 NPDES Permit Outfall #: 004  
 MONTH: August YEAR: 2018  
 Average Low Temp: 71  
 Average High Temp: 86  
 Measured Rainfall: 4.14  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Q.ave (MGD)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month	8/1/2018	16:35	17:10	0.58	0.396	0.010
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24:00	0.18	**	8/8/2018	19:35	20:15	0.67	0.532	0.015
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	8/12/2018	14:15	21:00	6.75	0.262	0.074
6	8/13/2018	9:25	16:40	7.25	0.77	1 month	8/13/2018	13:30	14:25	0.92	0.283	0.011
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.110

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
**LOCATION:** 005  
**NPDES Permit Outfall #:**  
**MONTH:** August YEAR: 2018  
 Average Low Temp: 71  
 Average High Temp: 86  
 Measured Rainfall: 4.14  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Q avg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month						
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24:00	0.18	**						
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	8/12/2018	14:10	14:35	0.42	4.295	0.075
6	8/13/2018	9:25	16:40	7.25	0.77	1 month						
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.075

Note: Overflow occurs when Interceptor level reaches 71"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Whalley Ave. 30 yds from Fitch Street  
 NPDES Permit Outfall #: 006  
 MONTH: August YEAR: 2018  
 Average Low Temp: 71  
 Average High Temp: 86  
 Measured Rainfall: 4.14  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qave (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month	8/1/2018	16:35	17:00	0.42	0.576	0.010
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**	8/8/2018	19:40	20:15	0.58	0.658	0.016
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	8/12/2018	14:15	15:35	1.33	4.050	0.225
6	8/13/2018	9:25	16:40	7.25	0.77	1 month	8/13/2018	13:50	14:35	0.75	0.192	0.006
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.257

Note: Overflow occurs when Interceptor level reaches 27"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG Grand Avenue & James Street

LOCATION: 009

NPDES Permit Outfall #:

August YEAR: 2018

MONTH: 71

Average Low Temp: 86

Average High Temp:

Measured Rainfall: 4.14

Measured Snowfall: 0

EVENT No.	RAINFALL EVENT					CSO EVENT						
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month	8/1/2018	16:35	17:00	0.42	2.248	0.039
2	8/4/2018	7:35	11:40	4.08	0.51	1 month	8/4/2018	8:05	8:15	0.17	0.088	0.001
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**						
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month						
6	8/13/2018	9:25	16:40	7.25	0.77	1 month	8/13/2018	13:15	13:55	0.67	3.649	0.101
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.141

Note: Overflow occurs when Interceptor level reaches 30"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011

NPDES Permit Outfall #: August YEAR: 2018

MONTH: 71

Average Low Temp: 86

Average High Temp: 4.14

Measured Rainfall: 0

Measured Snowfall:

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month						
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**						
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	8/12/2018	14:05	15:25	1.33	5.316	0.295
6	8/13/2018	9:25	16:40	7.25	0.77	1 month						
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.295

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 75 Mitchell Drive  
 012  
 NPDES Permit Outfall #: August YEAR: 2018  
 MONTH: 71  
 Average Low Temp: 86  
 Average High Temp: 4.14  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month						
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**						
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month						
6	8/13/2018	9:25	16:40	7.25	0.77	1 month						
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: 15 James Street  
 015  
 NPDES Permit Outfall #: August YEAR: 2018  
 MONTH: 71  
 Average Low Temp: 86  
 Average High Temp: 4.14  
 Measured Rainfall: 0  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q.volum (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	START	STOP	DURATION (hours)		OUTFALL Qavg (MGD)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month	16:40	17:15	0.58	3.059	0.074
2	8/4/2018	7:35	11:40	4.08	0.51	1 month					
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**					
4	8/11/2018	8:45	19:15	10.50	0.49	**					
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	20:05	20:55	0.83	0.322	0.011
6	8/13/2018	9:25	16:40	7.25	0.77	1 month	13:15	15:15	2.00	1.606	0.134
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**					
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**					
9	8/22/2018	3:05	5:10	2.08	0.07	**					
10	8/23/2018	8:15	8:20	0.08	0.01	**					
<b>TOTAL MONTH</b>										<b>FLOW VOLUME =</b>	
										0.219	

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG Int. River & Poplar

LOCATION: 016

NPDES Permit Outfall #:

MONTH: August YEAR: 2018

Average Low Temp: 71

Average High Temp: 86

Measured Rainfall: 4.14

Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month	8/1/2018	16:40	17:40	1.00	2.962	0.123
2	8/4/2018	7:35	11:40	4.08	0.51	1 month	8/4/2018	8:05	8:40	0.58	0.394	0.010
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**						
4	8/13/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	8/12/2018	13:55	21:05	7.17	0.171	0.051
6	8/13/2018	9:25	16:40	7.25	0.77	1 month	8/13/2018	13:10	17:00	3.83	3.502	0.559
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.743

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG Clifton and Quininiac

LOCATION: 020

NPDES Permit Outfall #:

August YEAR: 2018

MONTH: 71

Average Low Temp: 86

Average High Temp: 4.14

Measured Rainfall: 0

Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Avg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month						
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**						
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month						
6	8/13/2018	9:25	16:40	7.25	0.77	1 month						
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 NPDES Permit Outfall #: 021  
 MONTH: August YEAR: 2018  
 Average Low Temp: 71  
 Average High Temp: 86  
 Measured Rainfall: 4.14  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month						
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**						
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month						
6	8/13/2018	9:25	16:40	7.25	0.77	1 month						
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Sea Street @ South Water Street  
 024  
 NPDES Permit Outfall #: 2018  
 MONTH: August YEAR: 2018  
 Average Low Temp: 71  
 Average High Temp: 86  
 Measured Rainfall: 4.14  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month						
2	8/4/2018	7:35	11:40	4.08	0.51	1 month						
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**						
4	8/11/2018	8:45	19:15	10.50	0.49	**						
5	8/12/2018	12:45	20:20	7.58	0.79	1 month	8/12/2018	20:45	21:20	0.58	4.080	0.099
6	8/13/2018	9:25	16:40	7.25	0.77	1 month						
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**						
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**						
9	8/22/2018	3:05	5:10	2.08	0.07	**						
10	8/23/2018	8:15	8:20	0.08	0.01	**						
<b>TOTAL MONTH</b>											<b>FLOW VOLUME =</b>	<b>0.099</b>

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Intersection of State & N. Front Street  
 025  
 NPDES Permit Outfall #: 2018  
 MONTH: August YEAR: 2018  
 Average Low Temp: 71  
 Average High Temp: 86  
 Measured Rainfall: 4.14  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q Qavg (MGD)	OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		
1	8/1/2018	16:10	16:35	0.42	0.53	6 month					
2	8/4/2018	7:35	11:40	4.08	0.51	1 month					
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**					
4	8/11/2018	8:45	19:15	10.50	0.49	**					
5	8/12/2018	12:45	20:20	7.58	0.79	1 month					
6	8/13/2018	9:25	16:40	7.25	0.77	1 month					
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**					
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**					
9	8/22/2018	3:05	5:10	2.08	0.07	**					
10	8/23/2018	8:15	8:20	0.08	0.01	**					

TOTAL MONTH  
FLOW VOLUME = 0.000

Note: Overflow occurs when interceptor level reaches 21"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: George and Temple Regulator 34  
 NPDES Permit Outfall #: August YEAR: 2018  
 MONTH: 71  
 Average Low Temp: 86  
 Average High Temp: 4.14  
 Measured Rainfall: 0  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	8/1/2018	16:10	16:35	0.42	0.53	6 month					
2	8/4/2018	7:35	11:40	4.08	0.51	1 month					
3	8/8/2018-8/9/2018	19:15	19:15	24.00	0.18	**					
4	8/11/2018	8:45	19:15	10.50	0.49	**					
5	8/12/2018	12:45	20:20	7.58	0.79	1 month					
6	8/13/2018	9:25	16:40	7.25	0.77	1 month	8/12/2018	14:10	20:35	6.42	0.638
7	8/17/2018-8/18/2018	23:10	2:50	3.67	0.21	**					
8	8/18/2018-8/19/2018	17:05	4:10	11.08	0.58	**					
9	8/22/2018	3:05	5:10	2.08	0.07	**					
10	8/23/2018	8:15	8:20	0.08	0.01	**					

TOTAL MONTH FLOW VOLUME = 0.171

# **METER DATA**

**JULY 2018**

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - JULY 2018**

**MONTHLY RAINFALL SUMMARY**

4.06 inches of rain (3.44 inches of rain in a typical month)

No snowfall

7 rain events (10 rain events in a typical month)

One 2 year storm, two 3 month storms, all other storms less than 1 month return frequency

<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	2	0.416
CSO 005	REG 005	1	0.008
CSO 004	REG 004	2	0.190
CSO 003	REG 003	2	0.365
CSO 024	REG 024	1	0.070
CSO 009	REG 009	1	0.220
CSO 016	REG 016	2	1.179
CSO 015	REG 015	2	0.365
CSO 011	REGS 010A, 011, 026	1	0.650
CSO 012	REGS 012A, 012B, 028	1	0.001
CSO 025	REGS 025, 034	2	0.204
CSO 021	REG 021	1	1.049
CSO 020	REG 020	0	0.000
<b>TOTAL</b>		<b>18</b>	<b>4.717</b>



**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES**

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	14	4,057	13	3,704		
CSO 005	REG 005	7	0,475	6	0,434		
CSO 004	REG 004	20	3,317	19	3,029		
CSO 003	REG 003	24	2,355	22	2,150		
CSO 024	REG 024	9	3,785	8	3,456		
CSO 009	REG 009	20	1,352	19	1,234		
CSO 016	REG 016	16	6,774	15	6,184		
CSO 015	REG 015	26	4,161	24	3,799		
CSO 011	REGS 010A, 011, 026	12	5,288	11	4,828		
CSO 012	REGS 012A, 012B, 028	6	0,254	6	0,232		
CSO 025	REGS 025, 034	9	2,970	9	2,711		
CSO 021	REG 021	13	8,613	12	7,863		
CSO 020	REG 020	3	0,021	3	0,019		
<b>TOTAL</b>		<b>176</b>	<b>43,402</b>	<b>161</b>	<b>39,621</b>		

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years

(2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years

(3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years

(4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 003  
 NPDES Permit Outfall #: 2018  
 MONTH: July YEAR: 2018  
 Average Low Temp: 57  
 Average High Temp: 84  
 Measured Rainfall: 4.06  
 Measured Snowfall: 0.00

EVENT NO.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Cave (MGD)	OUTFALL Q volume (MG)
1	7/6/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year	7/17/2018	16:15	23:05	6.83	0.915	0.261
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month	7/22/2018	23:25	23:55	0.50	5.012	0.104
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME = 0.365

Note: Overflow occurs when interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
 NPDES Permit Outfall #: 004  
 MONTH: July YEAR: 2018  
 Average Low Temp: 67  
 Average High Temp: 84  
 Measured Rainfall: 4.06  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Q avg (MGD)
1	7/15/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year						
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						
											TOTAL MONTH FLOW VOLUME =	0.190

Note: Overflow occurs when Interceptor level reaches 43"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: July YEAR: 2018  
 MONTH: 67  
 Average Low Temp: 84  
 Average High Temp: 4.06  
 Measured Rainfall: 0.00  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Clogs (MGD)	OUTFALL Q volume (MG)
1	7/16/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year						
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***	7/17/2018	16:30	21:45	5.25	0.036	0.008
5	7/22/2018	20:00	23:10	3.08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME = 0.008

Note: Overflow occurs when Interceptor level reaches 71"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Whalley Ave. 30 yards from Fitch Street  
 006  
 NPDES Permit Outfall #: July YEAR: 2018  
 MONTH: 67  
 Average Low Temp: 84  
 Average High Temp: 4.06  
 Measured Rainfall: 0.00  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	7/6/2018	10:50	13:05	2.25	0.13 ***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54 3 month						
3	7/17/2018	15:40	21:55	6.25	2.02 2 year	7/17/2018	16:20	22:35	6.25	1.421	0.370
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62 ***						
5	7/22/2018	20:00	23:10	3.08	0.40 3 month	7/22/2018-7/23/2018	23:35	0:10	0.58	1.893	0.046
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25 ***						
7	7/27/2018	18:35	19:15	0.67	0.08 ***						

TOTAL MONTH FLOW VOLUME = 0.416

Note: Overflow occurs when Interceptor level reaches 27"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Grand Avenue & James Street

**LOCATION:** 009

**NPDES Permit Outfall #:**

**MONTH:** July YEAR: 2018

**Average Low Temp:** 67

**Average High Temp:** 84

**Measured Rainfall:** 4.06

**Measured Snowfall:** 0.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)	
1	7/6/2018	10:50	13:05	2.25	0.13	***							
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month							
3	7/17/2018	15:40	21:55	6.25	2.02	2 year							
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***							
5	7/22/2018	20:00	23:10	3.08	0.40	3 month							
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***							
7	7/27/2018	18:35	19:15	0.67	0.08	***							
											<b>TOTAL MONTH</b>	<b>FLOW VOLUME =</b>	0.220

**Note:** Overflow occurs when Interceptor level reaches 30"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: July YEAR: 2018  
 MONTH: 67  
 Average Low Temp: 84  
 Average High Temp: 4.06  
 Measured Rainfall: 0.00  
 Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/6/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year						
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						
											TOTAL MONTH	0.650
											FLOW VOLUME =	

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 75 Mitchell Drive  
 NPDES Permit Outfall #: 012  
 MONTH: July YEAR: 2018  
 Average Low Temp: 67  
 Average High Temp: 84  
 Measured Rainfall: 4.06  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/6/2018	10:50	13:05	2.25	0.13 ***							
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54 3 month							
3	7/17/2018	15:40	21:55	6.25	2.02 2 year							
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62 ***							
5	7/22/2018	20:00	23:10	3.08	0.40 3 month							
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25 ***							
7	7/27/2018	18:35	19:15	0.67	0.08 ***							
											TOTAL MONTH FLOW VOLUME =	0.001



**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** 15 James Street  
**LOCATION:** 015  
**NPDES Permit Outfall #:**  
**MONTH:** July YEAR: 2018  
 Average Low Temp: 67  
 Average High Temp: 84  
 Measured Rainfall: 4.06  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/6/2018	10:50	13:05	2:25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8:83	0.54	3 month						
3	7/17/2018	15:40	21:55	6:25	2.02	2 year						
4	7/21/2018-7/22/2018	23:20	6:05	6:75	0.62	***						
5	7/22/2018	20:00	23:10	3:08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22:33	0.25	***	7/22/2018-7/23/2018	23:20	0:00	0.67	0.663	0.018
7	7/27/2018	18:35	19:15	0:67	0.08	***						

TOTAL MONTH FLOW VOLUME = 0.365

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

Int. River & Poplar

LOCATION:

016

NPDES Permit Outfall #:

July YEAR: 2018

MONTH:

Average Low Temp: 67

Average High Temp: 84

Measured Rainfall: 4.06

Measured Snowfall: 0.00

EVENT No.	RAINFALL EVENT							CSO EVENT				
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/6/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year	7/17/2018	16:10	22:25	6.25	3.887	1.012
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month	7/22/2018-7/23/2018	23:15	0:05	0.83	4.803	0.167
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME = 1.179

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Clifton and Quininiac  
 NPDES Permit Outfall #: 020  
 MONTH: July YEAR: 2018  
 Average Low Temp: 67  
 Average High Temp: 84  
 Measured Rainfall: 4.06  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/16/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:50	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year						
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME = 0.000

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 638 Long Wharf Drive

LOCATION: 021

NPDES Permit Outfall #:

MONTH: July YEAR: 2018

Average Low Temp: 67

Average High Temp: 84

Measured Rainfall: 4.06

Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/6/2018	10:50	13:05	2.25	0.13	***	7/17/2018	16:35	23:25	6.83	3.684	1.049
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year						
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME = 1.049

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Sea Street @ South Water Street  
 NPDES Permit Outfall #: 024  
 MONTH: July YEAR: 2018  
 Average Low Temp: 67  
 Average High Temp: 84  
 Measured Rainfall: 4.06  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Cavg Q (MGD)	OUTFALL Q <sub>3</sub> volume (MG)
1	7/6/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year	7/17/2018	21:40	22:10	0.50	3.363	0.070
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME = 0.070

Note: Overflow occurs when interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Intersection of State & N. Front Street  
 025  
 NPDES Permit Outfall #: July YEAR: 2018  
 MONTH: July YEAR: 2018  
 Average Low Temp: 67  
 Average High Temp: 84  
 Measured Rainfall: 4.06  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/6/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year						
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month						
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when interceptor level reaches 21"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

George and Temple  
Regulator 34

LOCATION:

NPDES Permit Outfall #:

MONTH:

July YEAR: 2018

Average Low Temp: 67

Average High Temp: 84

Measured Rainfall: 4.06

Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	7/6/2018	10:50	13:05	2.25	0.13	***						
2	7/14/2018-7/15/2018	22:40	7:30	8.83	0.54	3 month						
3	7/17/2018	15:40	21:55	6.25	2.02	2 year		16:00	21:50	5.83	0.823	0.200
4	7/21/2018-7/22/2018	23:20	6:05	6.75	0.62	***						
5	7/22/2018	20:00	23:10	3.08	0.40	3 month		23:20	23:30	0.17	0.512	0.004
6	7/25/2018-7/26/2018	8:55	7:15	22.33	0.25	***						
7	7/27/2018	18:35	19:15	0.67	0.08	***						

TOTAL MONTH FLOW VOLUME =

0.204

# **METER DATA**

**JUNE 2018**



**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - JUNE 2018**

**MONTHLY RAINFALL SUMMARY**

4.00 inches of rain (3.44 inches of rain in a typical month)

No snowfall

7 rain events (10 rain events in a typical month)

One 10 year storm, three 3 month storms, all other storms less than 1 month return frequency

<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	4	0.554
CSO 005	REG 005	1	0.067
CSO 004	REG 004	4	0.497
CSO 003	REG 003	4	0.579
CSO 024	REG 024	1	1.083
CSO 009	REG 009	3	0.490
CSO 016	REG 016	4	1.784
CSO 015	REG 015	4	0.695
CSO 011	REGS 010A, 011, 026	2	1.611
CSO 012	REGS 012A, 012B, 028	1	0.026
CSO 025	REGS 025, 034	3	1.158
CSO 021	REG 021	1	0.051
CSO 020	REG 020	1	0.002
<b>TOTAL</b>		<b>33</b>	<b>8.597</b>

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

CSO FLOW MONITORING PROGRAM

METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR CSO EVENTS		TYPICAL YEAR CSO VOLUME (MG)		TYPICAL YEAR CSO VOLUME (MG)	
		BASED ON RAINFALL <sup>(1)</sup>	BASED ON MONTHS <sup>(2)</sup>	BASED ON RAINFALL <sup>(2)</sup>	BASED ON MONTHS <sup>(3)</sup>	BASED ON RAINFALL <sup>(4)</sup>	BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	14	13	4,017	13	3,649	3,649
CSO 005	REG 005	7	6	0,500	6	0,455	0,455
CSO 004	REG 004	21	20	3,359	20	3,051	3,051
CSO 003	REG 003	25	23	2,334	23	2,120	2,120
CSO 024	REG 024	10	10	4,295	10	3,902	3,902
CSO 009	REG 009	23	21	1,307	21	1,187	1,187
CSO 016	REG 016	18	16	6,834	16	6,207	6,207
CSO 015	REG 015	29	26	4,169	26	3,787	3,787
CSO 011	REGS 010A, 011, 026	13	12	5,349	12	4,858	4,858
CSO 012	REGS 012A, 012B, 028	6	5	0,255	5	0,232	0,232
CSO 025	REGS 025, 034	9	8	2,952	8	2,681	2,681
CSO 021	REG 021	14	13	8,380	13	7,611	7,611
CSO 020	REG 020	4	4	0,026	4	0,024	0,024
<b>TOTAL</b>		<b>187</b>	<b>170</b>	<b>43,750</b>	<b>170</b>	<b>39,738</b>	<b>39,738</b>

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years

(2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years

(3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years

(4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 NPDES Permit Outfall #: 003  
 MONTH: June YEAR: 2018  
 Average Low Temp: 49  
 Average High Temp: 89  
 Measured Rainfall: 4.00  
 Measured Snowfall: 0.00

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Cavg (MGD)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	19:00	19:40	0.67	1.584	0.044
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month	6/4/2018	6:35	7:40	1.08	0.561	0.025
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/24/2018	19:55	20:35	0.67	1.628	0.045
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:05	9:55	3.83	2.914	0.465

TOTAL MONTH FLOW VOLUME = 0.579

Note: Overflow occurs when Interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Ella T. Grasso Blvd. - 23 yds North of Legion Ave.  
 004  
 MONTH: June YEAR: 2018  
 Average Low Temp: 49  
 Average High Temp: 89  
 Measured Rainfall: 4.00  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)			
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START		STOP	DURATION (hours)	OUTFALL Cavg (MGD)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	18:55	19:40	0.75	0.898	0.028
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month	6/4/2018	6:40	7:30	0.83	0.578	0.020
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/24/2018	19:55	20:35	0.67	0.709	0.020
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:05	9:15	3.17	3.249	0.429

TOTAL MONTH FLOW VOLUME = 0.497

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG Derby Ave. 20 yds East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: June YEAR: 2018  
 MONTH: 49  
 Average Low Temp: 89  
 Average High Temp: 4.00  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Avg (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month						
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month						
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:05	8:15	2.17	0.746	0.067

TOTAL MONTH FLOW VOLUME = 0.067

Note: Overflow occurs when Interceptor level reaches 71"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Whalley Ave. 30 yds from Fitch Street  
 006  
 MONTH: June YEAR: 2018  
 Average Low Temp: 49  
 Average High Temp: 89  
 Measured Rainfall: 4.00  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	19:05	19:25	0.33	1.224	0.017
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month	6/4/2018	6:55	7:25	0.50	0.768	0.016
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/24/2018	19:30	20:30	1.00	0.360	0.015
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:15	9:10	2.92	4.164	0.506

TOTAL MONTH FLOW VOLUME = 0.554

Note: Overflow occurs when Interceptor level reaches 27"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG Grand Avenue & James Street

LOCATION: 009

NPDES Permit Outfall #:

MONTH: June YEAR: 2018

Average Low Temp: 49

Average High Temp: 89

Measured Rainfall: 4.00

Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT				OUTFALL Q Avg (MGD)	OUTFALL Q volume (MG)		
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START			STOP	DURATION (hours)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	18:45	19:20	0.58	3.164	0.077
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/24/2018	19:50	20:15	0.42	1.892	0.033
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:05	8:40	2.58	3.532	0.380

TOTAL MONTH FLOW VOLUME = 0.490

Note: Overflow occurs when Interceptor level reaches 30"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** 547 East Street

**LOCATION:** 010A

**NPDES Permit Outfall #:**

**MONTH:** June **YEAR:** 2018

**Average Low Temp:** 49

**Average High Temp:** 89

**Measured Rainfall:** 4.00

**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	****						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month						
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	****						
5	6/21/2018	1:25	4:15	2.83	0.12	****						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month						
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	7:50	8:35	0.75	9.734	0.273

**TOTAL MONTH FLOW VOLUME = 0.273**

**Note:** Overflow occurs when interceptor level reaches 62"



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: June YEAR: 2018  
 MONTH: 49  
 Average Low Temp: 89  
 Average High Temp: 4.00  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT							CSO EVENT				
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qave (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	19:10	19:50	0.67	2.849	0.079
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/28/2018	6:10	9:20	3.17	9.541	1.259
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year						

TOTAL MONTH FLOW VOLUME = 1.338

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 011  
 NPDES Permit Outfall #: June YEAR: 2018  
 MONTH: 49  
 Average Low Temp: 89  
 Average High Temp: 4.00  
 Measured Rainfall: 0  
 Measured Snowfall:

EVENT No.	RAINFALL EVENT							CSO EVENT				
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	19:10	19:50	0.67	2.849	0.079
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.17	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month						
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:10	9:20	3.17	11.611	1.532

TOTAL MONTH FLOW VOLUME = 1.611

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 75 Mitchell Drive  
 NPDES Permit Outfall #: 012  
 MONTH: June YEAR: 2018  
 Average Low Temp: 49  
 Average High Temp: 89  
 Measured Rainfall: 4.00  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Cavg (MGD)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month						
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month						
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	7:55	8:35	0.67	0.931	0.026

TOTAL MONTH FLOW VOLUME = 0.026

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 15 James Street  
 NPDES Permit Outfall #: 015  
 MONTH: June YEAR: 2018  
 Average Low Temp: 49  
 Average High Temp: 89  
 Measured Rainfall: 4.00  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT							CSO EVENT				
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	18:50	19:45	0.92	0.947	0.036
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month	6/4/2018	6:35	7:50	1.25	3.117	0.162
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/24/2018	19:40	21:35	1.92	2.641	0.211
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:10	9:10	3.00	2.288	0.286

TOTAL MONTH FLOW VOLUME = 0.695

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height: 40.5"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG Int. River & Poplar

LOCATION: 016

NPDES Permit Outfall #:

MONTH: June YEAR: 2018

Average Low Temp: 49

Average High Temp: 89

Measured Rainfall: 4.00

Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)			
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)	
1	6/1/2018	0:45	10:50	10.08	0.05	***							
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	18:50	19:30	0.67	10.390	0.289	
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month	6/4/2018	6:45	7:45	1.00	5.247	0.219	
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***							
5	6/21/2018	1:25	4:15	2.83	0.12	***							
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/24/2018	19:55	20:30	0.58	8.997	0.219	
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:15	9:05	2.83	8.700	1.057	

TOTAL MONTH FLOW VOLUME = 1.784

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

Clifton and Quininiplac

LOCATION:

020

NPDES Permit Outfall #:

June YEAR: 2018

MONTH:

49

Average Low Temp:

89

Average High Temp:

4.00

Measured Rainfall:

0

Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT						CSO EVENT				
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month						
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month						
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	8:00	8:40	0.67	0.082	0.002

TOTAL MONTH FLOW VOLUME = 0.002

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 638 Long Wharf Drive  
 NPDES Permit Outfall #: 021  
 MONTH: June YEAR: 2018  
 Average Low Temp: 49  
 Average High Temp: 89  
 Measured Rainfall: 4.00  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	6/1/2018	0:45	10:50	10.08	0.05	****					
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month					
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month					
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	****					
5	6/21/2018	1:25	4:15	2.83	0.12	****					
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month					
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	7:50	8:35	0.75	1.643
TOTAL MONTH FLOW VOLUME =											0.051

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG** Sea Street @ South Water Street

**LOCATION:** 024

**NPDES Permit Outfall #:**

**MONTH:** June YEAR: 2018

**Average Low Temp:** 49

**Average High Temp:** 89

**Measured Rainfall:** 4.00

**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT						
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qeave (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.95	3 Month						
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month						
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	7:35	11:05	3.50	7.424	1.083

TOTAL MONTH FLOW VOLUME =

1.083

**Note:** Overflow occurs when Interceptor level reaches 83" in US & 99" in DS



**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
**LOCATION:** Intersection of State & N. Front Street  
**NPDES Permit Outfall #:** 025  
**MONTH:** June YEAR: 2018  
**Average Low Temp:** 49  
**Average High Temp:** 89  
**Measured Rainfall:** 4.00  
**Measured Snowfall:** 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month						
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month						
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 21"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

George and Temple  
Regulator 34

**LOCATION:**

NPDES Permit Outfall #:

MONTH: June YEAR: 2018

Average Low Temp: 49

Average High Temp: 89

Measured Rainfall: 4.00

Measured Snowfall: 0

EVENT No.	RAINFALL EVENT							CSO EVENT				
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qave (MGD)	OUTFALL Q volume (MG)
1	6/1/2018	0:45	10:50	10.08	0.05	***						
2	6/2/2018	18:35	19:05	0.50	0.35	3 Month	6/2/2018	18:55	19:15	0.33	13.711	0.190
3	6/4/2018	0:20	9:10	8.83	0.75	3 Month						
4	6/18/2018 - 6/19/2018	15:45	3:20	11.58	0.14	***						
5	6/21/2018	1:25	4:15	2.83	0.12	***						
6	6/24/2018	19:15	22:05	2.83	0.41	3 Month	6/24/2018	19:50	20:00	0.17	1.114	0.008
7	6/27/2018 - 6/28/2018	23:35	17:35	18.00	2.18	10 Year	6/28/2018	6:00	8:15	2.25	16.270	0.960

TOTAL MONTH  
FLOW VOLUME = 1.158

# **METER DATA**

**MAY 2018**

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY			
CSO FLOW MONITORING PROGRAM			
METER DATA SUMMARY - MAY 2018			
<u>MONTHLY RAINFALL SUMMARY</u>			
2.93 inches of rain (3.44 inches of rain in a typical month)			
No snowfall			
11 rain events (10 rain events in a typical month)			
One 3 month storm, all other storms less than 1 month return frequency			
<u>CSO NUMBER</u>	<u>REGULATOR NUMBERS</u>	<u>CSO EVENTS</u>	<u>CSO VOLUME (MG)</u>
CSO 006	REGS 006 A, 006 B	1	0.366
CSO 005	REG 005	1	0.033
CSO 004	REG 004	1	0.061
CSO 003	REG 003	0	0.000
CSO 024	REG 024	0	0.000
CSO 009	REG 009	0	0.000
CSO 016	REG 016	1	0.021
CSO 015	REG 015	3	0.229
CSO 011	REGS 010A, 011, 026	1	0.180
CSO 012	REGS 012A, 012B, 028	0	0.000
CSO 025	REGS 025, 034	1	0.295
CSO 021	REG 021	0	0.000
CSO 020	REG 020	0	0.000
<b>TOTAL</b>		<b>9</b>	<b>1.185</b>

**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY**

**CSO FLOW MONITORING PROGRAM**

**METER DATA SUMMARY - 2 YEAR ROLLING AVERAGE - TYPICAL YEAR ESTIMATES**

CSO NUMBER	REGULATOR NUMBERS	TYPICAL YEAR		TYPICAL YEAR	
		CSO EVENTS BASED ON RAINFALL <sup>(1)</sup>	CSO VOLUME (MG) BASED ON RAINFALL <sup>(2)</sup>	CSO EVENTS BASED ON MONTHS <sup>(3)</sup>	CSO VOLUME (MG) BASED ON MONTHS <sup>(4)</sup>
CSO 006	REGS 006 A, 006 B	13	3,968	11	3,467
CSO 005	REG 005	7	0,541	6	0,473
CSO 004	REG 004	21	3,273	18	2,859
CSO 003	REG 003	24	2,135	21	1,865
CSO 024	REG 024	11	3,986	10	3,482
CSO 009	REG 009	22	1,111	20	0,971
CSO 016	REG 016	17	6,419	15	5,607
CSO 015	REG 015	28	4,192	25	3,662
CSO 011	REGS 010A, 011, 026	13	4,794	11	4,188
CSO 012	REGS 012A, 012B, 028	6	0,251	5	0,219
CSO 025	REGS 025, 034	8	2,441	7	2,133
CSO 021	REG 021	14	8,688	13	7,590
CSO 020	REG 020	4	0,027	4	0,024
<b>TOTAL</b>		<b>183</b>	<b>41,801</b>	<b>160</b>	<b>36,514</b>

(1) Estimated Typical Year CSO Events Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Events in the last two years / Rainfall in the last two years

(2) Estimated Typical Year CSO Volume (MG) Based on Rainfall Methodology = Typical Year Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) in the last two years / Rainfall in the last two years

(3) Estimated Typical Year CSO Events Based on Monthly Methodology = 12 x CSO Events in the last two years / Meter Months in the last two years

(4) Estimated Typical Year CSO Volume (MG) Based on Monthly Methodology = 12 x CSO Volume (MG) in the last two years / Meter Months in the last two years

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Orange Ave. @ Int. of Ella T. Grasso Blvd.  
 003  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: 46  
 Average Low Temp: 84  
 Average High Temp: 2.93  
 Measured Rainfall: 0.00  
 Measured Snowfall: 0.00

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month						
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when interceptor level reaches 46"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Ella T. Grasso Blvd. - 23 yards North of Legion Ave.  
 LOCATION: 004  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: May YEAR: 2018  
 Average Low Temp: 46  
 Average High Temp: 84  
 Measured Rainfall: 2.93  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Clave (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:35	19:10	1.58	0.992	0.061
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.061

Note: Overflow occurs when Interceptor level reaches 43"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG Derby Ave. 20 yards East of Ella T. Grasso Blvd.  
 LOCATION: 005  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: 46  
 Average Low Temp: 84  
 Average High Temp: 2.93  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Cave (MGD)	OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP			DURATION (hours)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:35	18:00	0.42	1.899	0.033
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.033

Note: Overflow occurs when Interceptor level reaches 71"



**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 LOCATION: Whalley Ave. 30 yds from Fitch Street  
 006  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: May YEAR: 2018  
 Average Low Temp: 46  
 Average High Temp: 84  
 Measured Rainfall: 2.93  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:30	18:50	1.33	6.856	0.366
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.366

Note: Overflow occurs when Interceptor level reaches 27"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG Grand Avenue & James Street

LOCATION: 009

NPDES Permit Outfall #:

MONTH: May YEAR: 2018

Average Low Temp: 46

Average High Temp: 84

Measured Rainfall: 2.93

Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month						
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.600

Note: Overflow occurs when Interceptor level reaches 30"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 547 East Street

LOCATION: 010A

NPDES Permit Outfall #:

May 2018

MONTH:

46

Average Low Temp:

84

Average High Temp:

2.93

Measured Rainfall:

0

Measured Snowfall:

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month						
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 62"

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: 46  
 Average Low Temp: 84  
 Average High Temp: 2.93  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	RAINFALL EVENT				CSO EVENT							
	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Clogs (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:45	18:50	1.08	3.979	0.180
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.180

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG

LOCATION: 011  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: May 46  
 Average Low Temp: 84  
 Average High Temp: 2.93  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qvavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/5/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:45	18:50	1.08	3.979	0.180
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.180

Sum of 010A and 011

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 75 Mitchell Drive  
 012  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: May YEAR: 2018  
 Average Low Temp: 46  
 Average High Temp: 84  
 Measured Rainfall: 2.93  
 Measured Snowfall: 0

EVENT NO.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Avg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month						
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.000

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: 15 James Street  
 NIPDES Permit Outfall #: 015  
 MONTH: May YEAR: 2018  
 Average Low Temp: 46  
 Average High Temp: 84  
 Measured Rainfall: 2.93  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:40	19:05	1.42	2.803	0.165
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***	5/19/2018	15:45	16:35	0.83	0.537	0.030
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***	5/23/2018	3:35	4:10	0.58	1.400	0.034
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.229

Expected capacity of siphon is between 24 and 30 MGD.  
 Weir Height 40.5"

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Int. River & Poplar 016  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: May 46  
 Average Low Temp: 84  
 Average High Temp: 2.93  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q. volume (MG)		
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)	OUTFALL Qavg (MGD)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:40	18:05	0.42	1.200	0.021
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.021



FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG  
 LOCATION: Clifton and Quinmpiac  
 020  
 NPDES Permit Outfall #: May YEAR: 2018  
 MONTH: May 46  
 Average Low Temp: 84  
 Average High Temp: 2.93  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month						
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.000

FLOW MONITORING REPORT SUMMARY TABLE

CSO EVENTS LOG 638 Long Wharf Drive

LOCATION: 021

NPDES Permit Outfall #:

MONTH: May YEAR: 2018

Average Low Temp: 46

Average High Temp: 84

Measured Rainfall: 2.93

Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month						
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.000

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**  
 LOCATION: Sea Street @ South Water Street  
 NPDES Permit Outfall #: 024  
 MONTH: May YEAR: 2018  
 Average Low Temp: 46  
 Average High Temp: 84  
 Measured Rainfall: 2.93  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT				CSO EVENT				OUTFALL Q volume (MG)	
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP		DURATION (hours)
1	5/3/2018	19:20	23:35	4.25	0.19	***					
2	5/6/2018	16:55	19:25	2.50	0.06	***					
3	5/10/2018	22:15	22:50	0.58	0.08	***					
4	5/12/2018	11:00	20:20	9.33	0.13	***					
5	5/13/2018	14:10	14:15	0.08	0.01	***					
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month					
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***					
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***					
9	5/22/2018	14:45	18:25	3.67	0.22	***					
10	5/23/2018	3:00	4:10	1.17	0.25	***					
11	5/31/2018	17:35	22:50	5.25	0.14	***					

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 83" in US & 99" in DS

**FLOW MONITORING REPORT SUMMARY TABLE**

CSO EVENTS LOG  
 LOCATION: Intersection of State & N. Front Street  
 025  
 MONTH: May YEAR: 2018  
 NPDES Permit Outfall #: 46  
 Average Low Temp: 84  
 Average High Temp: 2.93  
 Measured Rainfall: 0  
 Measured Snowfall: 0

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month						
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.000

Note: Overflow occurs when Interceptor level reaches 2.1"

**FLOW MONITORING REPORT SUMMARY TABLE**

**CSO EVENTS LOG**

George and Temple  
Regulator 34

**LOCATION:**  
NPDES Permit Outfall #:

**MONTH:** May  
Average Low Temp: 46  
Average High Temp: 84  
Measured Rainfall: 2.93  
Measured Snowfall: 0

**YEAR:** 2018

EVENT No.	DATE	RAINFALL EVENT					CSO EVENT					OUTFALL Q volume (MG)
		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	
1	5/3/2018	19:20	23:35	4.25	0.19	***						
2	5/6/2018	16:55	19:25	2.50	0.06	***						
3	5/10/2018	22:15	22:50	0.58	0.08	***						
4	5/12/2018	11:00	20:20	9.33	0.13	***						
5	5/13/2018	14:10	14:15	0.08	0.01	***						
6	5/15/2018	17:15	19:30	2.25	0.63	3 Month	5/15/2018	17:35	18:00	0.42	16.992	0.295
7	5/16/2018 - 5/17/2018	13:15	10:55	21.67	0.54	***						
8	5/19/2018 - 5/20/2018	7:15	9:55	26.67	0.68	***						
9	5/22/2018	14:45	18:25	3.67	0.22	***						
10	5/23/2018	3:00	4:10	1.17	0.25	***						
11	5/31/2018	17:35	22:50	5.25	0.14	***						

TOTAL MONTH FLOW VOLUME = 0.295